Title 20

DEVELOPMENT CODE

Division I. Unified Development Code

Chapter 20.80

Critical Areas

NOTE: Changes are indicated as follows –
Insertions are single underline
Deletions are ~~single strikethrough~~
Existing language moved from another section is double underline
Existing language deleted and moved to new location in the code is ~~double strikethrough~~

Sections:

Subchapter 1. Critical Areas – General Provisions

Subchapter 2. Geologic Hazard Areas

Subchapter 1.

Critical Areas – General Provisions

20.80.010 Purpose.

A. The purpose of this chapter is to establish supplemental standards for the protection of critical areas, as defined in SMC 20.20.014, in compliance with the provisions of the Washington Growth Management Act of 1990 (Chapter 36.70A RCW), consistent with the Western Washington Phase II Municipal Stormwater Permit, and consistent with the goals and policies of the Shoreline Comprehensive Plan in accordance with the procedures of Chapter 20.30 SMC. The standards of this chapter incorporated into the Shoreline Master Program, in SMC 20.230.030(A) General Regulations (1), shall apply within the shoreline jurisdiction, where critical areas are present. If there are any conflicts or unclear distinctions between the Master Program and the City's critical areas regulations, the most restrictive requirements apply as determined by the City.

B. By identifying and regulating development and alterations to critical areas and their buffers, it is the intent of this chapter to:

1. Protect the public from injury, loss of life, property damage or financial losses due to flooding, erosion, landslide, seismic events, or soils subsidence ~~or steep slope failure~~;

2. Protect unique, fragile and valuable elements of the environment;

3. Reduce cumulative adverse environmental impacts to water quality, wetlands, streams and other aquatic resources, fish and wildlife habitat, ~~steep slopes~~ landslide hazards and other geologically unstable features and protect the functions and values of critical areas from overall net loss;

4. Ensure the long-term protection of ground and surface water quality;

5. Alert members of the public, including appraisers, assessors, owners, potential buyers, or lessees, to the development limitations of critical areas and their required buffers;

6. Serve as a basis for exercise of the City's substantive authority under the State Environmental Policy Act (SEPA) and the City's Environmental Procedures (Chapter 20.30 SMC, Subchapter 8); and comply with the requirements of the Growth Management Act (Chapter 36.70A RCW) and its implementing rules;

7. Establish standards and procedures that are intended to protect ~~environmentally~~ critical areas while accommodating the rights of property owners to use their property in a reasonable manner; and

8. Provide for the management of critical areas to maintain their functions and values and to restore degraded ecosystems.

C. This Chapter is to be administered with flexibility and attention to site-specific characteristics. It is not the intent of this Chapter to make a parcel of property unusable by denying its owner reasonable economic use of the property or to prevent the provision of public facilities and services necessary to support existing development and planned for by the community without decreasing current service levels below minimum standards. (Ord. 641 § 5 (Exh. A), 2012; Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(A), 2000).

20.80.0~~2~~15 Applicability.

A. Unless explicitly exempted, the provisions of this chapter shall apply to all land uses, and development activity and all structures and facilities within all zoning designations in the City of Shoreline, whether or not a permit or authorization is required, that are within the maximum buffer distance for each critical area type, even if the critical area is on adjacent property. All persons within the City shall comply with the requirements of this chapter.

B. The City shall not approve any permit or otherwise issue any authorization to alter the condition of any land,

water or vegetation or to construct or alter any structure or improvement without first assuring compliance with the requirements of this chapter.

C. Approval of a permit or development proposal pursuant to the provisions of this chapter does not discharge the obligation of the applicant to comply with the provisions of this chapter.

D. The provisions of this chapter shall apply to any forest practices over which the City has jurisdiction pursuant to Chapter 76.09 RCW and WAC Title 222. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(E), 2000. Formerly 20.80.050.).

20.80.045~~2~~0 Relationship to other regulations.

A. These critical area regulations shall apply as an overlay and in addition to zoning, land use, and other regulations established by the City of Shoreline. In the event of any conflict between these regulations and any other regulations of the City, the regulations which provide greater protection to the ~~environmentally~~ critical areas shall apply.

B. Areas characterized by particular critical areas may also be subject to other regulations established by this chapter due to the overlap or multiple functions of some critical areas. ~~Wetlands, for example, may be defined and regulated according to the provisions for fish and wildlife habitat conservation areas contained in this chapter, as well as provisions regulating wetlands.~~ In the event of any conflict between regulations for particular critical areas in this chapter, the regulations which provide greater protection to ~~environmentally~~ critical areas shall apply.

C. These critical areas regulations shall apply concurrently with review conducted under the State Environmental Policy Act (SEPA), as necessary and locally adopted. Any conditions required pursuant to this chapter shall be included in the SEPA review and threshold determination.

D. Compliance with the provisions of this chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, Shoreline Substantial Development Permits, Hydraulic Permit Act (HPA) permits, Section 106 of the National Historic Preservation Act, U.S. Army Corps of Engineers Section 404 permits, National Pollution Discharge Elimination System permits). The applicant is responsible for complying with these requirements, apart from the process established in this chapter. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(K), 2000. Formerly 20.80.110.).

20.80.02~~0~~5 Critical areas maps.

A. The approximate location and extent of identified critical areas within the City's planning area are shown on the critical areas maps adopted as part of this chapter, including but not limited to the maps identified in sections SMC 20.80.222, 20.80.272 and 20.80.322. These maps shall be used for informational purposes only to assist property owners and other interested parties. Boundaries and locations indicated on the maps are generalized. Critical areas and their buffers may occur within the City which have not previously been mapped.

B. The actual presence or absence, type, extent, boundaries, and classification of critical areas shall be identified in the field by a qualified professional, and determined by the City, according to the procedures, definitions and criteria established by this chapter. In the event of any conflict between the critical area location or designation shown on the City's maps and the criteria or standards of this chapter, the criteria and standards shall prevail.

C. The critical areas maps shall be periodically updated by the City and shall reflect any permit activity, results of special studies and reports reviewed and approved by the City, amendments to the Comprehensive Plan ~~Environmental~~ Natural Environment Element, and Department identified errors and corrections. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(D), 2000. Formerly 20.80.040.).

~~**20.80.025 Applicability.**~~

~~A. Unless explicitly exempted, the provisions of this chapter shall apply to all land uses and within all zoning~~

~~designations in the City of Shoreline. All persons within the City shall comply with the requirements of this chapter.~~

~~B. The City shall not approve any permit or otherwise issue any authorization to alter the condition of any land, water or vegetation or to construct or alter any structure or improvement without first assuring compliance with the requirements of this chapter.~~

~~C. Approval of a development proposal pursuant to the provisions of this chapter does not discharge the obligation of the applicant to comply with the provisions of this chapter.~~

~~D. The provisions of this chapter shall apply to any forest practices over which the City has jurisdiction pursuant to Chapter 76.09 RCW and WAC Title 222. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(E), 2000. Formerly 20.80.050.).~~

20.80.030 Exemptions.

Notwithstanding the exemptions provided by this section, any otherwise exempt activities occurring in or near a critical area or critical area buffer should meet the purpose and intent of SMC 20.80.010 and should consider on-site alternatives that avoid or minimize impacts. To be exempt from this chapter does not give permission to degrade a critical area or ignore risk from natural hazards. Any incidental damage to, or alteration of, a critical area that is not a necessary outcome of the exempted activity shall be restored, rehabilitated, or replaced at the responsible party's expense. The following activities shall be exempt from the provisions of this chapter, but are not exempt from applicable permits:

A. **Emergencies.** Alterations in response to emergencies which threaten the public health, safety and welfare or which pose an imminent risk of damage to private property as long as any alteration undertaken pursuant to this subsection is reported to the City as soon as possible. Only the minimum intervention necessary to reduce the risk to public health, safety, or welfare and/or the imminent risk of damage to private property shall be authorized by this exemption. The City shall confirm that an emergency exists and determine what, if any, additional applications and/or measures shall be required to protect the environment consistent with the provisions of this chapter, and to repair any damage to a preexisting resource. If the Director determines that the action taken, or any part of the action taken, was beyond the scope of an allowed emergency action, then enforcement provisions of SMC 20.80.130 *Unauthorized critical area alterations* shall apply.

After the emergency, the person or agency undertaking the action shall fully fund and conduct necessary restoration and other mitigation for any impacts to the critical area and buffers resulting from the emergency action in accordance with an approved critical area report and restoration/mitigation plan. The person or agency undertaking the action shall apply for review, and the alteration, critical area report, and mitigation plan shall be reviewed by the City in accordance with the review procedures contained herein. Mitigation activities must be initiated within one (1) year of the date of the emergency;

B. **Utility Operation, Maintenance, Repair, or Replacement.** Public water, electric and natural gas distribution, public sewer collection, cable communications, telephone, utility and related activities undertaken pursuant to City-approved best management practices, and best available science with regard to protection of threatened and endangered species, as follows:

1. Normal and routine maintenance or repair of existing utility structures or rights-of-way;

2. Relocation of electric facilities, lines, equipment or appurtenances, not including substations, with an associated voltage of 55,000 volts or less, only when required by the City of Shoreline, which approves the new location of the facilities;

3. Replacement, operation, repair, modification or installation or construction in an improved City road right-of-way or City-authorized private roadway of all electric facilities, lines, equipment or appurtenances, not including substations, with an associated voltage of 55,000 volts or less;

4. Relocation of public sewer local collection, public water local distribution, natural gas, cable

communication or telephone facilities, lines, pipes, mains, equipment or appurtenances, only when required by the City of Shoreline, which approves the new location of the facilities; ~~and~~

5. Replacement, operation, repair, modification, relocation, installation or construction of public sewer local collection, public water local distribution, natural gas, cable communication or telephone facilities, lines, pipes, mains, equipment or appurtenances when such facilities are located within an improved public right-of-way or City-authorized private roadway; and

6. Repair and maintenance of existing private connections to public utilities and private stormwater management facilities consistent with best practices. Revegetation of disturbed areas is required to be native vegetation, unless the existing, non-native vegetation is re-established with no change to type or extent.

C. **Roadway Operation, Maintenance, Repair, or Replacement.** Maintenance, operation, repair, modification or replacement of publicly improved roadways or City authorized private roadway, and associated stormwater drainage systems as long as any such alteration does not involve the expansion of roadways or related improvements into previously unimproved rights-of-way or portions of rights-of-way and does not alter a wetland or watercourse, such as culverts or bridges, or result in the transport of sediment or increased stormwater. Retention and replanting of native vegetation shall occur wherever possible along the right-of-way improvement and resulting disturbance;

D. **Recreation Areas Operation, Maintenance, Repair, or Replacement.** Maintenance, operation, ~~or~~ repair, modification, or replacement of existing publicly improved recreation areas as long as any such activity does not involve the expansion of ~~uses and/or~~ facilities and existing improvements into a previously unimproved portion of ~~a preexisting area~~ critical areas or required buffers. Maintenance, operation, ~~and~~ repair, modification, and replacement of publicly improved recreation areas within designated fish and wildlife habitat areas shall be permitted if all activities are performed consistent with the development standards of this chapter, best available science or adaptive management plans as recognized by the City. Retention and replanting of native vegetation shall occur wherever possible in areas of land disturbance;

~~E. Activities affecting isolated Type IV wetlands which are individually smaller than 1,000 square feet;~~

~~F. Activities occurring in areas which may be considered small steep slopes (areas of 40 percent slope or greater with a vertical elevation change of up to, but not greater than 20 feet), such as berms, retaining walls, excavations and small natural slopes, and activities on steep slopes created through prior legal grading activity may be exempted based upon City review of a soils report prepared by a qualified geologist or geotechnical engineer which demonstrates that no adverse impact will result from the exemption;~~

~~G~~E. **Minor Conservation and Enhancement.** Minor conservation and enhancement of critical areas that does not alter the location, dimensions or size of the critical area or buffer, and results in improvement of the critical area functions, including the following invasive species removal activities:

1. ~~Within City-owned property, r~~Removal of noxious weeds or invasive vegetation as identified by the Washington State or King County Noxious Weed Control Boards in a wetland buffer, stream buffer, other~~stream~~ fish and wildlife habitat conservation areas and buffers or geologic hazard area (excluding very high risk landslide hazard areas), or the area within a three-foot radius of a tree ~~on a steep slope~~ in very high risk landslide hazard areas and buffers is allowed when:

   a. Undertaken with hand labor, including handheld mechanical tools; ~~–~~

   b. When prescribed by ~~unless~~ the King County Noxious Weed Control Board, ~~otherwise prescribes~~ the use of riding mowers, light mechanical cultivating equipment, herbicides or biological control methods; ~~and~~ may be allowed only with permit and approval by the City on private property or when ~~b. and~~

   ~~P~~performed in accordance with SMC 20.80.085, *Pesticides, herbicides and fertilizers on City-owned property*; ~~and~~

c. Plants that appear on the Washington State or King county Noxious Weed Board Lists must be handled and disposed of in accordance with the ~~King County~~ best management practices ~~noxious weeds and invasive vegetation~~ appropriate to that species and approved by the City when permit review is applicable; ~~and~~

~~c~~d. Areas cleared by removal of invasive plant species must be revegetated with site appropriate native species at natural densities and the site ~~The cleared area is revegetated with native vegetation and~~ must be ~~s~~stabilized against erosion in accordance with the ~~Department of Ecology 2005~~ adopted ~~S~~stormwater ~~Management M~~manual ~~for Western Washington~~; ~~and~~

~~d~~e. All work is performed above the ordinary high water mark and above the top of a stream bank; and

~~e~~f. The following limits must not be exceeded:

i. Within City-owned property, n~~N~~o more than 3,000 square feet of soil may be exposed at any one time~~.~~; or

ii. Within private property, not more than 500 square feet of area may be cleared, as calculated cumulatively over one (1) year, without a permit and critical area report prepared by a qualified professional; or

2. Vegetation management consistent with a previously approved critical area mitigation, restoration, remediation, or enhancement plan that requires ongoing maintenance and vegetation management beyond final inspection and the required monitoring period for the permitted project;

~~H~~F. **Active Hazard Trees.** Removal of active or imminent hazardous trees in accordance with SMC 20.50.310(A)(1)(c);

~~I~~G. **Nonimminent Hazard Trees.** Removal of not active or imminent hazardous trees in accordance with the following:

1. For hazardous circumstances that are not active or imminent, such as suspected tree rot or diseased trees or less obvious structural wind damage to limbs or trunks, a permit exemption request form must be submitted by the property owner together with a ~~risk assessment~~ tree evaluation form prepared by a qualified professional arborist as defined in SMC 20.20.042. Both the permit exemption request form and ~~risk assessment~~ tree evaluation form shall be provided by the Director;

2. The permit exemption request form shall include a grant of permission for the Director and/or ~~his~~ qualified professionals under contract with or employed by the City to enter the subject property to evaluate the circumstances. Attached to the permit exemption request form shall be a risk assessment form that documents the hazard and which must be signed by a certified arborist or professional forester;

3. No permit exemption request shall be approved until the Director reviews the submitted forms and conducts a site visit. The Director may ~~direct that a peer review~~ require third party review of the request be performed by a qualified professional under contract with or employed by the City at the applicant's ~~cost~~ expense, and may require that the subject tree(s) and vegetation be cordoned off with yellow warning tape during the review of the request for exemption;

4. Approval to cut or clear trees may only be given upon recommendation of the ~~City approved~~ qualified professional arborist that the condition constitutes an actual threat to life or property in homes, private yards, buildings, public or private streets and driveways, sidewalks, improved utility corridors, or access for emergency vehicles and any trail as proposed by the property owner and approved by the Director for purposes of this section;

5. The Director shall authorize only such alteration to existing trees and vegetation as may be necessary to eliminate the hazard and shall condition authorization on means and methods of removal necessary to minimize environmental impacts, including replacement of any significant trees. The arborist shall

include an assessment of whether a portion of the tree suitable for a snag for wildlife habitat may safely be retained. All work shall be done utilizing hand-held implements only, unless the property owner requests and the Director approves otherwise in writing. The Director may require that all or a portion of cut materials be left on site;

6. The trees shall be replaced within one year consistent with the provisions of SMC 20.50.360. Where nonsignificant trees are approved for removal as hazardous, replacement shall be one tree for each tree removed. Replacement tree may be planted at a different, nearby location on the same property if it can be determined that the planting in the same location would create a new hazard or potentially damage the critical area; and

7. If a tree to be removed provides priority habitat, such as an eagle perch, a qualified professional shall be consulted to determine timing and methods of removal that will minimize and mitigate impacts.

~~J~~H. **Site Investigation.** Site investigative work and studies necessary for preparing land use applications, including soils tests, water quality studies, wildlife studies and similar tests and investigations; provided, that any disturbance of the critical area shall be the minimum necessary to carry out the work or studies;

~~K~~I. **Passive Outdoor Activities.** When it can be demonstrated that there will be no undue adverse effect, the following activities may be allowed within critical areas and their buffers: educational activities, scientific research, and outdoor recreational activities, including but not limited to interpretive field trips, bird watching, public beach access including water recreation-related activities, bicycling and hiking, that will not have an undue adverse effect on the critical area;

~~L~~J. **Normal Maintenance.** Normal and routine maintenance and operation of existing landscaping and gardens~~, provided they comply with all other regulations in this chapter~~ including pruning, beneficial to the tree, of protected trees consistent with SMC 20.50.350(E);

K. **Chemical Applications.** The application of herbicides, pesticides, organic or mineral-derived fertilizers, or other hazardous substances, if necessary, provided that their use shall be restricted in accordance with state Department of Fish and Wildlife Management Recommendations and the regulations of the state Department of Agriculture and the U.S. Environmental Protection Agency;

~~M~~L. **Minor Activities.** Minor activities not mentioned above and determined by the City to have minimal impacts to a critical area;

~~N. Notwithstanding the exemptions provided by this section, any otherwise exempt activities occurring in or near a critical area should meet the purpose and intent of SMC 20.80.010 and should consider on-site alternatives that avoid or minimize impacts;~~ and

~~O~~M. **Utility Mitigation Projects.** Mitigation projects related to utilities construction in critical areas or their buffers. (Ord. 640 § 1 (Exh. A), 2012; Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(G), 2000. Formerly 20.80.070.).

20.80.040 ~~Partial exemptions~~Allowed activities.

A. ~~The following are exempt from the provisions of this chapter except for the notice to title provisions and the flood hazard area provisions, if applicable.~~ **Critical Area Report.** Activities allowed under this section shall have been reviewed and permitted or approved by the City and any other agency with jurisdiction, but do not require submittal of a separate critical area report, unless such submittal was required previously for the underlying permit. The Director may apply conditions to the underlying permit or approval to ensure that the allowed activity is consistent with the provisions of this chapter to protect critical areas.

B. **Best Management Practices.** All allowed activities shall be conducted using the best management practices that result in the least amount of impact to the critical areas. Best management practices shall be used for tree and vegetation protection, construction management, erosion and sedimentation control, water quality protection, and regulation of chemical applications. The City shall observe the use of best management

practices to ensure that the activity does not result in degradation to the critical area. Any incidental damage to, or alteration of, a critical area shall be restored, rehabilitated, or replaced at the responsible party's expense.

C. **Allowed Activities.** The following activities are allowed:

1. **Modifications to Existing Structures within Critical Areas.** Structural modification of, addition to, maintenance, repair, or replacement of legally nonconforming structures consistent with SMC 20.30.280~~, except single detached residences, in existence before November 27, 1990~~, which do not meet the building setback or buffer requirements for wetlands, ~~streams~~ fish and wildlife habitat conservation areas, or ~~steep slope~~ geologic hazard areas if the modification, addition, replacement or related activity does not increase the existing building footprint of the structure or area of hardscape lying within the ~~above-described building setback area, sensitive~~ critical area or buffer. Within landslide hazard areas additions that add height to a nonconforming structure may only be allowed with review of a critical area report demonstrating that no increased risk of the hazard will occur. Where nonconforming structures are partially located within critical areas or their buffers additions are allowed with a critical area report delineating the critical area(s) and required buffers showing that the addition is located entirely outside the critical area or buffer;

~~2. Structural modification of, addition to, or replacement of single detached residences in existence before November 27, 1990, which do not meet the building setback or buffer requirements for wetlands, streams or steep slope hazard areas if the modification, addition, replacement or related activity does not increase the existing footprint of the residence lying within the above-described buffer or building setback area by more than 750 square feet over that existing before November 27, 1990, and no portion of the modification, addition or replacement is located closer to the critical area or, if the existing residence is within the critical area, extend farther into the critical area; and~~

~~3. Maintenance or repair of structures which do not meet the development standards of this chapter for landslide or seismic areas if the maintenance or repair does not increase the footprint of the structure and there is no increased risk to life or property as a result of the proposed maintenance or repair.~~

2. **Demolition.** Demolition of structures located within critical areas or their buffers, excluding demolition of structures necessary to support or stabilize landslide hazard areas, subject to approval of a stormwater pollution prevention plan consistent with the adopted stormwater manual and clearing limits that will adequately protect the critical area.

~~B~~3. **Permit Requests Subsequent to Previous Critical Area Review.** A permit or approval sought as part of a development proposal for which multiple permits are required is exempt from the provisions of this chapter, except for the notice to title provisions, as applicable if:

~~1~~a. The City of Shoreline has previously reviewed all critical areas on the site; and

~~2~~b. There is no material change in the development proposal since the prior review; and

~~3~~c. There is no new information available which may alter previous critical area review of the site or a particular critical area; and

~~4~~d. The permit or approval under which the prior review was conducted has not expired or, if no expiration date, no more than five years have lapsed since the issuance of that permit or approval; and

~~5~~e. The prior permit or approval, including any conditions, has been complied with. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(H), 2000. Formerly 20.80.080.).

20.80.045 Critical areas preapplication meeting.

A. A preapplication meeting, pursuant to SMC 20.30.080, is required prior to submitting an application for development or use of land or prior to starting a development activity or use of the land that may be regulated by

the provisions of this chapter unless specifically exempted in SMC 20.80.030.

B. A determination may be provided through the preapplication meeting regarding whether critical area reports are required, and if so what level of detail and what elements may be necessary for the proposed project. This determination does not preclude the Director from requiring additional critical area report information during the review of the project. After a site visit and review of available information for the preapplication meeting the Director may determine:

1. **No Critical Areas Present.** If the Director's analysis indicates that the project area is not within or adjacent to a critical area or buffer and that the proposed activity is unlikely to degrade the functions or values of a critical area, then the Director shall determine that the critical area review is complete and note in the preapplication meeting summary letter the reasons that no further review is required.

2. **Critical Areas Present, But No Impact.** If the Director determines that there are critical areas within or adjacent to the project area, but that the best available science shows that the proposed activity is unlikely to degrade the functions or values of the critical area, the Director may waive the requirement for a critical area report. A waiver may be granted if there is substantial evidence that all of the following requirements will be met:

a. There will be no alteration of the critical area or buffer;

b. The development proposal will not impact the critical area in a manner contrary to the purpose, intent, and requirements of this chapter; and

c. The proposal is consistent with other applicable regulations and standards.

A summary of this analysis and the findings shall be included in the preapplication meeting summary letter and any staff report or decision on the underlying permit.

3. **Critical Areas May Be Affected by Proposal.** If the Director determines that a critical area or areas may be affected by the proposal, then the Director shall notify the applicant that a critical area report(s) must be submitted prior to further review of the project, and indicate each of the critical area types that should be addressed in the report. Additionally, the Director may indicate the sections or report types that must be included in the critical report(s) consistent with SMC 20.80.080.

20.80.~~070~~050 Alteration of critical areas.

A. In general, critical areas shall be maintained in their natural state or current legally established condition, including undisturbed, native vegetation to maintain the functions, values, resources, and public health and safety for which they are protected. Alteration of critical areas, including their established buffers, may only be permitted subject to the criteria and standards in this chapter, and compliance with any Federal and/or State permits required. Unless otherwise provided in this chapter, if alteration of the critical area is unavoidable, all adverse impacts to or from critical areas and buffers resulting from a development proposal or alteration shall be mitigated using the best available science in accordance with an approved critical areas report, so as to result in no overall net loss of critical area functions and values and no increased risk of hazards. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 2(A), 2000. Formerly 20.80.160.).

20.80.~~080~~053 ~~Alteration or development of critical areas—Standards and criteria.~~Mitigation Requirements. Mitigation shall be sufficient to maintain or compensate for the impacted functions and values of the critical area and to prevent risk from a hazard posed by a critical area. Mitigation shall not be implemented until after the Director has provided approval of a critical areas report that includes a mitigation plan.

A. **Mitigation Sequencing.** This section applies to mitigation required with all critical areas reviews, approvals, and enforcement pursuant to this chapter. This section is supplemented with specific measures under subchapters for particular critical areas. Mitigation for specific development proposals may include a combination of the measures below and shall be designed and constructed in accordance with the provisions of

this section. ~~The proponent proponent for a project involving critical areas shall avoid, minimize and mitigate the impacts to the critical areas through actions that occur in the following sequence.~~ Before impacting any critical areas an applicant shall demonstrate that the following actions have been taken in the follow sequential order of preference:

~~A~~1. Avoiding the impact altogether by not taking a certain action or parts of actions;

~~B~~2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;

~~C~~3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment or by restoring or stabilizing the hazard area through natural, engineering, or other methods;

~~D~~4. Reducing or eliminating the impact over time through preservation and maintenance operations during the life of the action;

~~E~~5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or

~~F~~6. Monitoring, measuring and reporting the impact to the ~~Planning~~ Director and taking appropriate corrective measures.

C. Applicants must first demonstrate an inability to avoid or reduce impacts before the use of actions to mitigate potential impacts will be allowed. No activity or use shall be allowed that results in a net loss of the functions or values of critical areas. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 2(B), 2000. Formerly 20.80.170.).

D. **Type, Location, and Timing of Mitigation.** Unless it is demonstrated that a higher level of ecological functioning or greater reduction of hazard risk would result from an alternative approach or as otherwise allowed in this chapter, mitigation for adverse impacts shall be in-kind, on-site, and prior to the activities that will disturbed the critical area. Mitigation measures that cannot be implemented prior to the critical area impacts shall be completed immediately following disturbance and prior to use or occupancy of the action or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

1. The ~~Administrator~~ Director may authorize a one-time temporary delay in completing construction or installation of the mitigation when the applicant provides a written explanation from a qualified ~~wetland~~ professional as to the rationale for the delay. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g., project delay lapses past a fisheries window, or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay shall not be injurious to the health, safety, or general welfare of the public. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the compensatory mitigation plan. The justification must be verified and approved by the City.

20.80.056 Voluntary critical area restoration projects.

A. When a critical area restoration project is proposed that is not required as mitigation for a development proposal, the City may grant relief from standard critical area buffer requirements if the restoration project involves:

1. The daylighting of a stream, or

2. Creation or expansion of a wetland that would increase the area of the wetland and/or wetland buffer

B. At the time a restoration project is proposed, a buffer shall be established that will apply to the restoration project boundary. Restoration project buffers shall be established according to the following requirements:

1. A buffer may be applied to the restored portion of the stream or wetland that is not less than seventy-five percent (75%) of the standard buffer associated with the type of stream or category of wetland; or,

2. The project proponent may request a reduced buffer of between fifty percent (50%) and seventy-five percent (75%) of the standard buffer associated with the type of stream or category of wetland. The following criteria will be used by the City in reviewing the request for a reduced buffer:

a. The Director determines that applying a seventy-five percent (75%) buffer would significantly limit the use of the property for existing or permitted uses, thus making the restoration project infeasible;

b. The proposed buffer relief is the minimum necessary to achieve the restoration project;

c. There will be a net environmental benefit from the restoration project with the reduced buffer;

d. Granting the proposed relief is consistent with the objectives of the critical area restoration project and consistent with purposes of the City's critical area regulations.

20.80.060 Best available science.

A. **Protect Functions and Values of Critical Areas With Special Consideration to Anadromous Fish.** Critical area reports and decisions to alter critical areas shall rely on the best available science to protect the functions and values of critical areas and required buffers and must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish, such as salmon and bull trout, and their habitat, where applicable.

B. **Best Available Science to be Consistent With Criteria.** The best available science is that scientific information, obtained through a valid scientific process, that is applicable to the critical area prepared by local, state, or federal natural resource agencies, a qualified scientific professional, or team of qualified scientific professionals that is consistent with criteria established in WAC 365-195-900 through WAC 365-195-925 and RCW 36.70A.172.

C. **Characteristics of a Valid Scientific Process.** In the context of critical areas protection, a valid scientific process is one that produces reliable information useful in understanding the consequences of a local government's regulatory decisions, and in developing critical areas policies and development regulations that will be effective in protecting the functions and values of critical areas and buffers. To determine whether information received during the permit review process is reliable scientific information, the Director shall determine whether the source of the information displays the characteristics of a valid scientific process. Such characteristics are as follows:

1. **Peer Review.** The information has been critically reviewed by other persons who are qualified scientific experts in that scientific discipline. The proponents of the information have addressed the criticism of the peer reviewers. Publication in a refereed scientific journal usually indicates that the information has been appropriately peer-reviewed;

2. **Methods.** The methods used to obtain the information are clearly stated and reproducible. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer-reviewed to ensure their reliability and validity;

3. **Logical Conclusions and Reasonable Inferences.** The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained;

4. **Quantitative Analysis.** The data have been analyzed using appropriate statistical or quantitative methods;

5. **Context.** The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge; and

6. **References.** The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature, and other pertinent existing information.

D. **Nonscientific Information.** Nonscientific information, such as anecdotal observations, non-expert opinion, and hearsay, may supplement scientific information, but it is not an adequate substitute for valid and available scientific information.

E. **Absence of Valid Scientific Information.** Where there is an absence of valid scientific information or incomplete scientific information relating to a critical area leading to uncertainty about the risk to critical area function of permitting an alteration of or impact to the critical area, the Director shall:

1. Take a "precautionary or a no-risk approach," that strictly limits development and land use activities until the uncertainty is sufficiently resolved; and

2. Require application of an effective adaptive management program that relies on scientific methods to evaluate how well regulatory and nonregulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty. An adaptive management program shall:

a. Address funding for the research component of the adaptive management program;

b. Change course based on the results and interpretation of new information that resolves uncertainties; and

c. Commit to the appropriate timeframe and scale necessary to reliably evaluate regulatory and nonregulatory actions affecting protection of critical areas and anadromous fisheries.

20.80.~~1~~070 Classification and rating of critical areas.

To promote consistent application of the standards and requirements of this chapter, critical areas within the City of Shoreline shall be rated or classified according to their characteristics, function and value, and/or their sensitivity to disturbance. Classification of critical areas shall be determined by the City using the following tools:

A. Application of the criteria contained in these regulations;

B. Consideration of the ~~technical~~ critical area reports submitted by qualified professionals in connection with applications subject to these regulations; and

C. Review of maps adopted pursuant to this chapter. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 2(E), 2000. Formerly 20.80.200.).

20.80.~~1~~080 Critical areas reports ~~required~~ - Requirements.

A. **Report Required.** If uses, activities, or developments are proposed within, adjacent to, or are likely to impact critical areas or their buffers, an applicant shall provide site-specific information and analysis in the form of critical area report(s) as ~~determined by the City~~ required in this chapter. Critical area reports are required in order to identify the presence, extent, and classification/rating of potential critical areas, as well as to analyze, assess, and mitigate the potential adverse impact to or risk from critical areas for a development project. Critical area reports shall use standards for best available science in SMC 20.80.060.Critical area reports for two or more types of critical areas must meet the report requirements for each type of critical area. The expense of preparing the critical area report(s) shall be borne by the applicant. ~~The site-specific information must be obtained by expert investigation and analysis.~~ This provision is not intended to expand or limit an applicant's other obligations under WAC 197-11-100. ~~Such site-specific reviews shall be performed by qualified professionals, as defined by SMC 20.20.042, who are approved by the City or under contract to the City.~~

B. **Preparation by Qualified Professional.** Critical area report(s) shall be prepared by qualified professional(s) as defined in SMC 20.20.042, with the required training and experience specific to the type(s) of critical area(s) present consistent with the requirements of SMC 20.80.240, 20.80.290, and 20.80.340. Proof of licensing, credentials, and resume of the qualified professional(s) preparing the report must be submitted for review by the City to determine if the minimum qualifications are met.

C. **Third Party Review of Critical Area Reports.** Review of required critical area reports by a qualified professional under contract with or employed by the City will be required by the Director at the applicant's expense in any of the following circumstances:

1. The project requires a Critical Area Reasonable Use Permit (CARUP), Critical Area Special Use Permit (CASUP), or Shoreline Variance application; or

2. Third party review is specifically required by the provisions of this chapter for the critical area(s) or critical area buffer(s) potentially being impacted; or

3. When the Director determines such services are necessary to demonstrate compliance with the standards and guidelines of this chapter.

D. **Critical Area Report Types or Sections.** Critical area reports may be met in stages through multiple reports or combined in one report. A critical area report shall include one or more of the following sections or report types unless exempted by the Director and the extent of the potential critical area impacts. The scope and location of the proposed project will determine which report(s) alone or combined are sufficient to meet the critical area report requirements for the impacted critical area type(s). The typical sequence of required sections or reports that will fulfill the requirements of this section include:

1. **Reconnaissance.** The existence, general location, and type of critical areas in the vicinity (within 300 feet for wetlands and fish and wildlife habitat conservation areas and within 200 feet for geologic hazards, shorelines, flood plains, and aquifer recharge areas) of a project site. Determination of whether the project will adversely impact or be at risk from the potential critical areas based on maximum potential buffers and possible application of SMC 20.80.276(D)(7) or SMC 20.80.324(H)(10) should be addressed;

2. **Delineation.** The extent, boundaries, rating or classification, and applicable standard buffers of critical areas where the project area could potentially impact the critical area or its buffer including an assessment of the characteristics of or functions and values of the critical area and buffers identified;

3. **Analysis.** The proposal and impact assessment report documenting the potential project impacts to the critical area and buffers including a discussion of the efforts taken to avoid, minimize, and reduce potential impacts to those areas;

4. **Mitigation.** The potential impacts and mitigation measures designed to meet the requirements of this chapter, in SMC 20.80. 082 *Mitigation plan requirements*, and the standards for the specific critical areas impacted. Mitigation includes, but is not limited to, adjustments to required buffer sizes, best practices to minimize impacts, and critical area or buffer enhancement, restoration, or preservation plans. Mitigation

plans include habitat management plans, revegetation, or replanting plans, and restoration plans;

5. **Maintenance and Monitoring.** The goals of the mitigation proposed, performance standards for success, monitoring methods and reporting schedule, maintenance methods and schedule, and contingency actions. Maintenance and monitoring plans must be consistent with the mitigation performance standards and requirements of this chapter, including SMC 20.80.250, 20.80.300, and 20.80.350.

E. **Minimum Report Contents.** At a minimum critical area reports shall contain the following:

1. The name and contact information of the applicant;

2. Provide adequate information to determine compliance with the requirements of the critical area regulations, Chapter 20.80 SMC, including critical area report, impact and hazard assessment, and mitigation requirements specific to each critical area type, as indicated in the corresponding sections of this chapter;

3. The dates, names, and qualifications of the qualified professional(s) preparing the report and documentation of any fieldwork performed on the site;

4. A description of the proposal, proposal location including address and parcel number(s), and a vicinity map for the project;

5. Identification of the development permit(s) requested and all other local, State, and/or Federal critical area-related permits required for the project;

6. A copy of the site plan for the development proposal including:

a. A map to standard engineering scale depicting critical areas, buffers, the development proposal, and any areas to be altered. In addition to plan size site plans, a legible, reduced (8.5”x11”) copy will be required if noticing is required for the project; and

b. A scaled depiction and description of the proposed storm water pollution prevention plan, consistent with the adopted stormwater manual, for the development and consideration of impacts to critical areas due to drainage alterations;

7. Identification and characterization of all critical areas, wetlands, water bodies, shorelines, and buffers within the vicinity of the proposed project area (within 300 feet for wetlands and fish and wildlife habitat conservation areas and within 200 feet for geologic hazards, shorelines, floodplains, and aquifer recharge areas);

8 A statement specifying the accuracy of the report and all assumptions made and relied upon;

9. A description of the methodologies used to conduct the critical areas investigation, including references;

10. An assessment of the probable impacts to the critical areas resulting from the proposed development of the site based upon identified findings;

11. A description of reasonable efforts made to apply mitigation sequencing pursuant to SMC 20.80.053, Alteration of critical areas, to avoid, minimize, and mitigate impacts to critical areas; and

12. Plans for mitigation required to offset any critical areas impacts, in accordance with SMC 20.80.082 Mitigation plan requirements and the corresponding mitigation performance standards sections of this chapter and including a discussion of the applicable development standards and cost estimates for determination of financial guarantee requirements.

F. **Existing reports.** Unless otherwise provided, a critical areas report may incorporate, be supplemented by or

composed, of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the Director. At the discretion of the Director, reports previously compiled or submitted as part of a proposal for development may be used as a critical areas report to the extent that the requirements of this section and the report requirements for each specific critical area type are met. Critical areas reports shall be considered valid for five years; after such date the City shall determine whether a revision or additional assessment is necessary. Supplemental critical area report(s) may be required to provide information and analysis to address changes to the project scope and potential impacts or applicable regulations that have been made subsequent to existing, valid critical area reports.

G. **Modifications to report requirements.**

1. **Limitations to Study Area.** The Director may limit the required geographic area of the critical areas report as appropriate if:

a. The applicant, with assistance from the City of Shoreline, cannot obtain permission to access properties adjacent to the project area; or

b. The proposed activity will affect only a limited part of the subject site.

2. **Modifications to Required Contents.** The applicant may consult with the Director prior to or during preparation of the critical areas report to obtain approval of modifications to the required contents of the report where, in the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation. In some cases, such as when it is determined that no geologic hazard area is present, a full report may not be necessary to determine compliance with the critical area regulations, Chapter 20.80 SMC, and in those cases a letter or reconnaissance only report may be provided.

3. **Additional Information Requirements.** The Director may require additional information to be included in the critical areas report when determined to be necessary to the review of the proposed activity in accordance with this chapter. Additional information that may be required includes, but is not limited to:

a. Historical data, including original and subsequent mapping, aerial photographs, data compilations and summaries, and available reports and records relating to the site or past operations at the site;

b. Grading and drainage plans; and

c. Information specific to the type, location, and nature of the critical area. (Ord. 581 § 1 (Exh. 1), 2010; Ord. 515 § 1, 2008; Ord. 406 § 1, 2006; Ord. 398 § 1, 2006).

20.80.082 Mitigation plan requirements. When mitigation is required, the applicant shall submit for approval by the City a mitigation plan as part of the critical area report. Mitigation plans must meet the minimum requirements of SMC 20.80.080 and the applicable mitigation performance standards and requirements for the impacted type(s) of critical area(s) and buffer(s), including but not limited to SMC 20.80.250, 20.80.300, and 20.80.350. When the mitigation plan is submitted separately from other types or sections of the required critical area report(s) the mitigation plan must meet the minimum content requirements of SMC 20.80.080(E) by inclusion or reference to other existing report(s). The mitigation plan shall include:

A. **Environmental Goals and Objectives.** The mitigation plan shall include a written report identifying environmental goals and objectives of the mitigation proposed and including:

1. A description of the anticipated impacts to the critical areas and the mitigating actions proposed and the purposes of the compensation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site compensation construction activities. The goals and objectives shall be related to the functions and values of the impacted critical area; and

2. A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in restoring or creating the type of critical area proposed.

B. **Performance Standards.** The mitigation plan shall include measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained at the end of the required monitoring period and whether or not the requirements of this chapter have been met.

C. **Detailed Construction Plans.** The mitigation plan shall include written specifications and descriptions of the mitigation proposed, such as:

1. The proposed construction sequence, timing, and duration;

2. Site plans showing grading and excavation details with minimum 2-foot contour intervals;

3. Erosion and sediment control features;

4. A planting plan specifying plant species, quantities, locations, size, spacing, and density; and

5. Measures to protect and maintain plants until established.

These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.

~~C~~D. **Monitoring Program and Contingency Plan.**

1. A monitoring program shall be included in the mitigation plan and implemented by the applicant to determine the success of the mitigation project and any necessary corrective actions. This program shall determine if the original goals and objectives of the mitigation plan are being met.

2. A contingency plan shall be established for indemnity in the event that the mitigation project is inadequate or fails. Contingency plans include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met. Corrective measures will be required by the City when the qualified professional indicates, in a monitoring report, that the contingency actions are needed to ensure project success by the end of the monitoring period. A performance and maintenance bond or other acceptable financial guarantee is required to ensure the applicant's compliance with the terms of the mitigation agreement consistent with SMC 20.80.120 Financial guarantee requirements. ~~The amount of the performance and maintenance bond(s) shall equal 125 percent of the cost of the mitigation project in addition to the cost for monitoring for a minimum of five years. The bond may be reduced in proportion to work successfully completed over the period of the bond. The bonding period shall coincide with the monitoring period.~~

3. Monitoring programs prepared to comply with this section shall ~~reflect~~ include the following requirements ~~guidelines~~:

a. Scientific procedures shall be used to establish the success or failure of the project. A protocol outlining the schedule for site monitoring (for example, monitoring shall occur in years 0 (as-built), 1, 3, and 5 after site construction), and how the monitoring data will be evaluated to determine if the performance standards are being met.

b. For vegetation determinations, permanent sampling points shall be established.

c. Vegetative success shall, at a minimum, equal 80 percent survival of planted trees and shrubs and 80 percent cover of desirable understory or emergent plant species at the end of the required monitoring period. ~~Additional~~ Alternative standards for vegetative success, including (but not limited to) minimum survival standards following the first growing season, may be required after consideration

of a recommendations provided in a critical area report ~~prepared by a qualified consultant~~ or as otherwise required by the provisions of this chapter.

d. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the mitigation project. Monitoring reports on the current status of the mitigation project shall be submitted, consistent with SMC 20.80.082(E), to the City on the schedule identified in the monitoring plan, but not less than every other year. The reports are to be prepared by a qualified ~~consultant~~ professional and reviewed by the City or a ~~consultant~~ qualified professional retained by the City and should include monitoring information on wildlife, vegetation, water quality, water flow, stormwater storage and conveyance, and existing or potential degradation, as applicable.~~, and shall be produced on the following schedule: at the time of construction; 30 days after planting; early in the growing season of the first year; at the end of the growing season of the first year; twice during the second year; and annually thereafter~~.

e. Monitoring programs shall be established for a period necessary to establish that performance standards have been met, but not for less than a minimum of five (5)years without approval from the Director. Monitoring programs for projects located within the shoreline jurisdiction must also comply with the standards in 20.230.020 and may require a longer monitoring period.

f. If necessary, failures in the mitigation project shall be corrected.

g. Dead or undesirable vegetation shall be replaced with appropriate plantings.

h. Damage caused by erosion, settling, or other geomorphological processes shall be repaired.

i. The mitigation project shall be redesigned (if necessary) and the new design shall be implemented and monitored, as in subsection (~~G~~D)(3)(d) of this section.

j. Correction procedures shall be approved by a qualified ~~consultant~~ professional and the City.

k. If the mitigation goals are not obtained within the initial monitoring period, the applicant remains responsible for restoration of the impacted values and functions or hazard risk reduction until the mitigation goals agreed to in the mitigation plan are achieved.

E. **Monitoring Reports.** Monitoring reports shall be submitted to the City consistent with the approved monitoring plan. The as-built report required prior to final inspection shall include documentation of departures from the original approved plans, construction supervision provided by the qualified professional, approved project goals and performance standards, baseline data for monitoring per the approved monitoring methods, photos from established photo points, and a site plan showing final mitigation as constructed or installed, monitoring points, and photo points. Subsequent monitoring reports shall include monitoring visit observations, documentation and analysis of monitoring data collected, photos from photo points, determination whether performance standards are being met, and maintenance and/or contingency action recommendations to ensure success of the project at the end of the monitoring period. The applicant shall be responsible for the cost (at the current hourly rate) of review of monitoring reports and site inspections during the monitoring period completed by the City or a qualified professional under contract with or employed by the City.

F. **Cost Estimates.** The mitigation plan shall include cost estimates that will be used by the City to calculate the amounts of financial guarantees, if necessary, to ensure that the mitigation plan is fully implemented. Financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures shall be posted in accordance with SMC 20.80.120 Financial guarantee requirements.

G. **Approved ~~Wetland~~ Mitigation Projects – Signature.** On completion of construction, an as-built report for any approved mitigation project shall be prepared and signed off by the applicant's qualified ~~consultant~~ professional and approved by the City. Signature of the qualified ~~consultant~~ professional on the required as-built report and approval by the City will indicate that the construction has been completed as planned.

20.80.085 Pesticides, herbicides and fertilizers on City-owned property.

Pesticides, herbicides and fertilizers which have been identified by State or Federal agencies as harmful to humans, wildlife, or fish, shall not be used in a City-owned riparian corridor, shoreline habitat or its buffer, wetland or its buffer, except as allowed by the Director for the following circumstances:

A. When the Director determines that an emergency situation exists where there is a serious threat to public safety, health, or the environment and that an otherwise prohibited application must be used as a last resort.

B. Compost or fertilizer may be used for native plant revegetation projects in any location.

C. Limited pesticide and herbicide use may be applied pursuant to the King County Noxious Weed Control Board best management practices specific to the species needing control when that is determined to be the best method of control for the location. Federal, state, and local regulations of pesticides and water quality must be followed, including requirements for pesticide applicator licensing from the Washington State Department of Agriculture. (Ord. 398 § 1, 2006)

20.80.090 Buffer areas.

The establishment of buffer areas shall be required for all development proposals and activities in or adjacent to critical areas. In all cases the standard buffer ~~(i.e., the maximum buffer required by the City)~~ shall apply unless the Director determines ~~that no net loss of functions and values will occur~~ that additional buffer width is necessary to protect the functions and values consistent with the provisions of this chapter and the recommendations of a qualified professional. The purpose of the buffer shall be to protect the integrity, function, value and resource of the subject critical area, and/or to protect life, property and resources from risks associated with development on unstable or critical lands. Buffers shall consist of an undisturbed area of native vegetation established to achieve the purpose of the buffer. If the buffer area has previously been disturbed, it shall be revegetated pursuant to an approved ~~planting~~ mitigation or restoration plan. Buffers shall be protected during construction by placement of a temporary barricade if determined necessary by the City, on-site notice for construction crews of the presence of the critical area, and implementation of appropriate erosion and sedimentation controls. Restrictive covenants or conservation easements may be required to preserve and protect buffer areas. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 2(C), 2000. Formerly 20.80.180.).

20.80.~~050~~100 Notice to title.~~A.~~ A critical area notice to title is required, when a permit or development application is submitted, as a condition of permit issuance or project approval, for development on any property containing a critical area or buffer. The purpose is t~~T~~o inform subsequent purchasers of real property of the existence of critical areas.~~, when development is permitted in an identified critical area or its associated buffer, a~~ This requirement can be met through recording of a Notice to Title prepared by the City, establishment of a Critical Area Tract, or recording of Native Growth Protection Area easement consistent with the following provisions.

A. **Notice to Title.** A notice to title is required when a permit is required for development on any property containing a critical area or buffer. The notice to title applicable to the property shall be approved by the Director and City Attorney for compliance with this provision and be filed by the property owner with the King County Recorder's Office. The title holder will have the right to challenge this notice and to have it extinguished if the critical area designation no longer applies. However, the titleholder shall be responsible for completing a critical area report, subject to approval by the Director, before the notice on title can be extinguished. The notice shall state that critical areas or buffers have been identified on the property and the fact that limitations on actions in or affecting the critical area or buffer may exist. The notice shall run with the land. A Critical Area Tract or Native Growth Protection Area easement shall be required to meet the notice to title requirement as follows: ~~This notice shall not be required for development by a public agency or public or private utility when:~~

~~1. Within a recorded easement or right-of-way; or~~

~~2. On the site of a permanent public facility.~~

~~B~~1. **Critical Area Tract.** Subdivisions, short subdivisions, ~~development agreements,~~ and binding site plans

shall establish a separate ~~tract (a~~ critical areas tract~~)~~ as a permanent protective measure for wetlands, ~~streams,~~ fish and wildlife habitat conservation areas, and landslide hazard areas and their buffers. The plat or binding site plan for the project shall clearly depict the critical areas tract, and shall include all of the subject critical area and any required buffer, ~~as well as~~ any additional lands~~, as~~ included voluntarily ~~determined~~ by the developer. Restrictions to development within the critical area tract shall be clearly noted on the plat or plan. Restrictions shall be consistent with this chapter for the entire critical area tract~~, including any additional areas included voluntarily by the developer~~. Should the critical area tract include several types of critical areas, the developer may establish separate critical areas tracts; or

2. **Native Growth Protection Area.** NGPA easements shall be required on a property where no subdivision, short subdivision, or binding site plan is proposed or required. Unless otherwise required in this chapter, native growth protection area (NGPA) easements shall be recorded on title for all affected parcels prior to approval of a development agreement, issuance of a Master Development Plan Permit, or issuance of a site development or building permit when two (2) or more dwelling units and/or nonresidential development are proposed on one parcel to delineate and protect those contiguous wetlands, fish and wildlife habitat conservation, and landslide hazard critical areas and their buffers. The easement to be recorded shall clearly depict the critical area and the limits of the NGPA easement and shall include all of the subject critical area(s) and any required buffer(s). Restrictions to development with in the NGPA easement shall be clearly noted in the easement and shall include the following:

a. That native vegetation will be preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, limiting chemical applications of hazardous substances (pesticides, herbicides, fertilizers), maintaining slope stability, buffering, and protecting plants, fish, and animal habitat; and

b. The right of the City to enforce the terms of the restriction.

D. **Modifications and Waivers.** Where the standards in this chapter allow for development within the identified critical areas, the Director may modify the language or dimensions of the required critical area tract or native growth protection area easement for consistency with the extent of the development to be permitted.

E. **Proof of Notice.** The applicant shall submit proof that the notice has been recorded on title before the City approves any development permit, including master development plan permits, for the property or, in the case of subdivisions, short subdivisions, binding site plans, or development agreements, at or before recording. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(M), 2000. Formerly 20.80.130.).

20.80.~~060~~110 Permanent field marking.

A. All critical areas tracts, easements, ~~or~~ and dedications, or as recommended by a qualified professional, shall be clearly marked on the site using permanent markings, placed at least every ~~300~~ fifty (50) feet, which include the following text:

~~This area has been identified as a <<INSERT TYPE OF CRITICAL AREA>> by the~~ City of Shoreline Designated Critical Area. Activities, including clearing and grading, removal of vegetation, pruning, cutting of trees or shrubs, planting of nonnative species, and other alterations may be prohibited. Help protect and care for this area. Please contact the City of Shoreline ~~Department of Development (206) 546-1811 for further information~~ with questions or concerns.

B. It is the responsibility of the landowner to maintain in perpetuity and replace if necessary all permanent field markings. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(N), 2000. Formerly 20.80.140.).

~~**20.80.100 Classification and rating of critical areas.**~~

~~To promote consistent application of the standards and requirements of this chapter, critical areas within the City of Shoreline shall be rated or classified according to their characteristics, function and value, and/or their sensitivity to disturbance. Classification of critical areas shall be determined by the City using the following tools:~~

~~A. Application of the criteria contained in these regulations;~~

~~B. Consideration of the technical reports submitted by qualified professionals in connection with applications subject to these regulations; and~~

~~C. Review of maps adopted pursuant to this chapter. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 2(E), 2000. Formerly 20.80.200.).~~

~~20.80.110 Critical areas reports required.~~

~~If uses, activities or developments are proposed within critical areas or their buffers, an applicant shall provide site-specific information and analysis as determined by the City. The site-specific information must be obtained by expert investigation and analysis. This provision is not intended to expand or limit an applicant's other obligations under WAC 197-11-100. Such site-specific reviews shall be performed by qualified professionals, as defined by SMC 20.20.042, who are approved by the City or under contract to the City. (Ord. 581 § 1 (Exh. 1), 2010; Ord. 515 § 1, 2008; Ord. 406 § 1, 2006; Ord. 398 § 1, 2006).~~

20.80.120 Financial guarantee requirements.

Bonds and other financial guarantees and associated Performance Agreements or Maintenance/Defect/Monitoring agreements shall be required for projects with required mitigation or restoration of impacts to critical areas or critical area buffers consistent with the following:

A. A Performance agreement and bond or other acceptable financial guarantee is required from the applicant when mitigation required pursuant to a development proposal is not completed prior to final permit approval, such as final plat approval or final building inspection. The amount of the performance bond(s) shall equal 125 percent of the cost of the mitigation project (after City mobilization is calculated).

B. A Performance agreement and bond or other acceptable financial guarantee is required from the applicant when restoration is required for remediation of a critical area violation. The amount of the performance bond(s) shall equal 125 percent of the cost of the mitigation project (after City mobilization is calculated).

C. A Maintenance/Defect/Monitoring agreement and bond or other acceptable financial guarantee is required to ensure the applicant's compliance with the conditions of the approved mitigation plan pursuant to a development proposal or restoration plan for remediation of a violation. The amount of the maintenance bond(s) shall equal 25 percent of the cost of the mitigation project (after City mobilization is calculated) in addition to the cost for monitoring for a minimum of five years. The monitoring portion of the financial guarantee may be reduced in proportion to work successfully completed over the period of the bond. The bonding period shall coincide with the monitoring period.

20.80.130 Unauthorized critical area alterations.

A. When a critical area or its buffer has been altered in violation of this chapter, all ongoing development work shall stop and the critical area shall be restored. The City shall have the authority to issue a stop work order to cease all development, and order restoration measures at the owner's or other responsible party's expense to remediate the impacts of the violation of provisions of this chapter.

B. **Requirement for Restoration Plan.** All development shall remain stopped until a restoration plan is prepared by the responsible party and an approved permit is issued by the City. Such a plan shall be prepared by a qualified professional using the best available science and shall describe how the actions proposed meet the minimum requirements described in subsection (C). The Director may, at the responsible party's expense, seek expert advice, including but not limited to third party review by a qualified professional under contract with or employed by the City, in determining if the plan meets the minimum performance standards for restoration. Submittal, review, and approval of required restoration plans for remediation of violations of Chapter 20.80 SMC, Critical Areas shall be completed through a site development permit application process.

C. **Minimum Performance Standards for Restoration.**

1. For alterations to aquifer recharge areas, flood hazard areas, wetlands, and habitat conservation areas, the following minimum performance standards shall be met for the restoration, provided that if the violator can demonstrate that greater functional and habitat values can be obtained, these standards may be modified:

   a. The pre-violation function and values of the affected critical areas and buffers shall be restored, including water quality and habitat functions;

   b. The pre-violation soil types and configuration shall be replicated;

   c. The critical area and buffers shall be replanted with native vegetation that replicates the vegetation historically, or pre-violation, found on the site in species types, sizes, and densities. The pre-violation functions and values should be replicated at the location of the alteration; and

   d. Information demonstrating compliance with the requirements in Section 20.80.082 Mitigation Plan Requirements and the applicable mitigation sections for the affected type(s) of critical area(s) and their buffer(s) shall be submitted to the Director with a complete site development permit application.

2. For alterations to flood and geological hazards, the following minimum performance standards shall be met for the restoration of a critical area, provided that, if the violator can demonstrate that greater safety can be obtained, these standards may be modified:

   a. The hazard shall be reduced to a level equal to, or less than, the pre-violation hazard;

   b. Any risk of personal injury resulting from the alteration shall be eliminated or minimized; and

   c. The hazard area and buffers shall be replanted with native vegetation sufficient to minimize the hazard.

D. **Site Investigation.** The Director is authorized to take such actions as are necessary to enforce this chapter. The Director shall prevent property credentials and obtain permission before entering onto private property.

E. **Penalties.** Any responsible party violating of any of the provisions of this chapter may be subject any applicable penalties per SMC 20.30.770 plus the following:

1. A square footage cost of three dollars ($3.00) per square foot of impacted critical area buffer; and a square footage cost of fifteen dollars ($15.00) per square foot of impacted critical area; and

2. A per tree penalty in the amount of $3,000 per non-significant tree and $9,000 per significant tree for trees removed from a critical area or critical area buffer in violation of the provisions of this chapter.

Subchapter 2.

Geologic Hazard Areas

20.80.210 GEOLOGIC HAZARDS - Designation and purpose.

A. Geologic hazard areas are those lands that are ~~affected by natural processes that make them susceptible to geologic events, such as landslides, seismic activity and severe erosion, especially bluff and ravine areas and steep slopes. Areas~~ susceptible to erosion, landsliding, seismic, or other geological events as identified by WAC 365-190-120. These areas may not be suited for any development activities, because they may pose a threat to public health and safety, or environmental standards.

Areas susceptible to one or more of the following types of hazards shall be designated as ~~g~~Geologically ~~h~~Hazard~~ous~~ areas:

~~1. Erosion hazard;~~

~~2~~1. Landslide hazard;

~~3~~2. Seismic hazard~~.~~;

3. Erosion hazard.

B. The primary purpose of geologic hazard area regulations is to avoid and minimize potential impacts to life and property from geologic hazards, conserve soil resources, and minimize structural damage relating to seismic hazards. This purpose shall be accomplished through appropriate levels of study and analysis, application of sound engineering principles, and regulation or limitation of land uses, including maintenance of existing ~~native~~ vegetation, regulation of clearing and grading activities, and control of stormwater. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 3(A), 2000).

20.80.220 GEOLOGIC HAZARDS - Classification.

Geologic hazard areas shall be classified according to the criteria in this section as follows:

A. **Landslide Hazard Areas.** Landslide Hazard Areas are those areas potentially subject to landslide activity based on a combination of geologic, topographic and hydrogeologic factors as classified in SMC 20.80.220(B) with ~~Those areas in the City of Shoreline on~~ slopes ~~40~~15 percent or steeper within a vertical elevation change of at least 10 feet or all areas of prior landslide activity regardless of slope. A slope is delineated by establishing its toe and top, and is measured by averaging the inclination over at least 10 feet of vertical relief (see Figure 20.80.220(B)). The edges of the geologic hazard are identified where the characteristics of the slope cross section change from one landslide hazard classification to another or no longer meet any classification. ~~For the purpose of this definition:~~

~~A~~1. The toe of a slope is a distinct topographic break ~~in slope~~ which separates slopes inclined at less than ~~40~~15 percent from slopes above that are ~~40~~15 percent or steeper. ~~Where no distinct break exists, the toe of a steep slope is the lower most limit of the area where the ground surface drops 10 feet or more vertically within a horizontal distance of 25 feet~~ A distinct topographic break is an area that extends at least 15 feet horizontally away from the slope and that slopes less than 15 percent; and

~~B~~2. The top of a slope is a distinct topographic break ~~in slope~~ which separates slopes inclined at less than ~~40~~15 percent from slopes below that are ~~40~~15 percent or steeper. ~~Where no distinct break exists, the top of a steep slope is the upper most limit of the area where the ground surface drops 10 feet or more vertically within a horizontal distance of 25 feet~~ A distinct topographic break is an area that is at least 15 feet horizontally away from the slope and that slopes less than 15 percent.

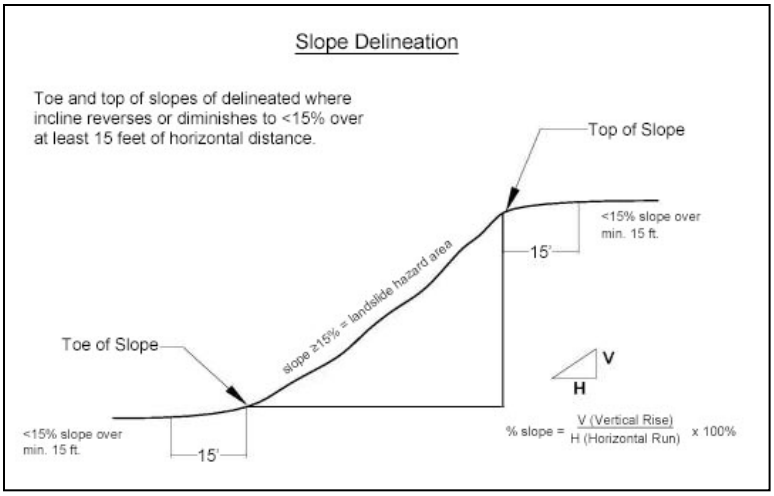

Figure 20.80.220(A): Illustration of slope calcuation for determination of top and toe of landslide hazard area.

3. Landslide hazard area classifications differentiated based on percent slope shall be delineated based on topographic change that extends at least 15 feet horizontally away from the slope and that slopes less than 40 percent, as determined by two (2) foot contour intervals, not averaging over the full landslide hazard area.

B. **Landslide Hazard Area Classification.** Landslide hazard areas are classified as follows:

1. Moderate to High Risk ~~Hazard~~:

   a. Areas with slopes between 15 percent and 40 percent and that are underlain by soils that consist largely of sand, gravel or glacial till that do not meet the criteria for Very High Risk areas in (3) below.

~~2. High Hazard:~~

   b. Areas with slopes between 15 percent and 40 percent that are underlain by soils consisting largely of silt and clay~~.~~ and do not meet the criteria for Very High Risk areas in (3) below; and

   c. All slopes of 10 to 20 feet in height that are 40 percent slope or steeper and do not meet the criteria for Very High Risk in (3)(a) or (3)(b) below.

3. Very High Risk ~~Hazard~~:

   a. Areas with slopes steeper than 15 percent with zones of emergent water (e.g., springs or ground water seepage)~~,~~;

   b. aAreas of landslide ~~deposits~~ activity (scarps, movement, or accumulated debris) regardless of slope~~,~~; and

   c. a~~A~~ll ~~steep~~ slopes ~~hazard areas sloping~~ that are 40 percent or steeper and more than 20 feet in height. Slope height shall include all areas greater than 40 percent slope that are not separated by breaks greater than 15 feet wide (horizontal run) less than 40 percent slope, as illustrated in Figure 20.80.220(B).

[place holder for cross section and plan view illustrations differentiating Moderate to High, and Very High risk landslide hazard areas]
Figure 20.80.220(B): Illustration of landslide hazard area delineation.

~~B~~C. **Seismic Hazard Areas.** Seismic hazard areas are lands that, due to a combination of soil and ground water conditions, are subject to ~~severe~~ risk of ground shaking, lateral spreading, subsidence or liquefaction of soils during earthquakes. These areas are typically underlain by soft or loose saturated soils (such as alluvium) or peat deposits and have a shallow ground water table. These areas are designated as having "high" and "moderate to high" risk of liquefaction as mapped on the *Liquefaction Susceptibility and Site Class Maps of Western Washington State by County* by the Washington State Department of Natural Areas or areas located within landslide hazards areas.

~~C~~D. **Erosion ~~and Sedimentation~~ Hazard Areas.** Erosion hazard areas are lands or areas underlain by soils identified by the U.S. Department of Agriculture Natural Resources Conservation Service (formerly the Soil Conservation Service) as having "severe" or "very severe" erosion hazards. This includes, but is not limited to, the following group of soils when they occur on slopes of 15 percent or greater: Alderwood-Kitsap (AkF), Alderwood gravelly sandy loam (AgD), Kitsap silt loam (KpD), Everett (EvD) and Indianola (InD). (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 3(B), 2000).

20.80.222 GEOLOGIC HAZARDS – Mapping.

A. The approximate location and extent of geologic hazard areas are shown on City of Shoreline critical areas inventory. In addition, resources providing information on the location and extent of geologic hazard areas include:

1. Washington Department of Ecology coastal zone atlas (for marine bluffs);

2. U.S. Geological Survey geologic maps, landslide hazard maps, and seismic hazard maps;

3. Washington State Department of Natural Resources seismic hazard maps for Western Washington, including, but not limited to the *Liquefaction Susceptibility and Site Class Maps of Western Washington State by County*;

4. Washington State Department of Natural Resources slope stability maps;

5. Soils maps produced by the US Department of Agriculture, National Resources Conservation Service; and

6. Geologic hazard data layers maintained in the City of Shoreline geographic information system (GIS).

B. The critical areas inventory and the resources cited above are to be used as a guide for the City of Shoreline Planning & Community Development department, project applicants, and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

20.80.224 GEOLOGIC HAZARDS – Development standards.

A. Activities and uses shall be allowed in geologic hazard areas and their required buffers only as provided for in this chapter.

B. **Activities allowed in all geologic hazard areas and buffers.** The activities listed below are allowed in the identified geologic hazard areas types pursuant to SMC 20.80.040 *Allowed Activities*. Exemptions are listed in SMC 20.80.030, but do not apply within the shoreline jurisdiction. These activities do not require submission of a critical area report.

1. All allowed activities per SMC 20.80.040;

2. Installation of fences as allowed without a building permit in Chapter 20.50 Development standards;

3. Non-structural interior remodel, ~~M~~maintenance, or repair of structures which do not meet the standards of this chapter ~~for landslide or seismic areas~~, if the maintenance or repair does not increase the footprint or height of the structure and there is no increased risk to life or property as a result of the proposed maintenance or repair; and

4. **Erosion Hazard Areas.** If the site does not contain another type of critical area or critical area buffer and does not exceed any other threshold contained in SMC 20.50.320, then up to 1,500 square feet may be cleared on any lot in an erosion hazard area without a permit ~~unless the site also contains another type of critical area or any other threshold contained in SMC 20.50.320 would be exceeded~~.

~~A~~C. **Alteration.** The City shall approve, condition, or deny proposals in a geologic hazard area ~~as appropriate~~ based upon the effective mitigation of risks posed to property, health and safety. The objective of mitigation measures shall be to render a site containing a geologic hazard as safe as one not containing such hazard. Conditions may include limitations of proposed uses, modification of density, alteration of site layout, and other appropriate changes to the proposal. Practices consistent with the adopted stormwater manual shall be incorporated into any project that alters geologic hazard areas to prevent increased risk of the hazard during and after construction.

Where potential impacts cannot be effectively mitigated to eliminate a significant risk to public health, safety and property, or important natural resources, the proposal shall be denied~~.~~, except as granted by a critical area special use or critical area reasonable use permit per SMC 20.30.333 and 20.30.336, or subject to the provisions of the Shoreline Master Program, SMC Title 20, Division II, where the proposed development activity is located within the shoreline jurisdiction.

~~B. **Very High Landslide Hazard Areas.** Development shall be prohibited in very high landslide hazards areas or their buffers except as granted by a critical areas special use permit or a critical areas reasonable use permit.~~

~~C~~D. **Alteration of Moderate ~~and~~ to High Risk Landslide Hazards.**
Development activities and uses that result in unavoidable alterations may be permitted in moderate ~~and~~ to high risk landslide hazard areas or their buffers ~~shall be evaluated by a qualified professional through the preparation of a geotechnical report~~ in accordance with an approved geologic hazard critical area report. ~~However, for proposals that include no development, construction, or impervious surfaces, the City, in its sole discretion, may waive the requirement for a geotechnical report.~~ The recommendations contained within the ~~geotechnical~~ critical area report shall be incorporated into the proposed alteration of the landslide hazard area or their buffers.

The ~~geotechnical engineer and/or geologist preparing the~~ critical area report shall ~~provide assurances~~ certify that the risk of damage from the proposal, both on-site and off-site, are minimal subject to the conditions set forth in the report, that the proposal will not increase the risk of occurrence of the potential landslide hazard, and that measures to eliminate or reduce risks have been incorporated into the report's recommendations and project development plans.

~~B~~E. **Alteration of Very High Risk Landslide Hazard Areas.**
~~Development shall be prohibited in very high landslide hazards or their buffers except as granted by a critical area special use permit or a critical area reasonable use permit.~~ Alterations of a very high risk landslide hazard area and/or buffer may only occur for activities for which a critical area report with a hazards analysis is submitted and certifies that:

1. The development will not increase surface water discharge or sedimentation on site or to adjacent properties beyond pre-development conditions;

2. The development will not decrease slope stability on the site or on adjacent properties;

3. Such alterations will meet other critical areas regulations; and

4. The design criteria in subsection (F) are met.

F. **Design Criteria for Alteration of Very High Risk Landslide Hazard Areas.** Development within a landslide hazard area and/or buffer shall be designed to meet the following basic requirements unless it can be demonstrated that an alternative project design provides greater short and long-term slope stability while meeting all other provisions of this Chapter. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function. The basic development design criteria are:

1. The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Proposed alteration of natural slopes, that does not include structures, shall not decrease the factor of safety for landslide occurrences below the limits of 1.3 for static conditions and 1.0 for seismic. Where the existing conditions are below these limits the proposed development shall increase the factor of safety to these limits or will not be permitted. Analysis of dynamic conditions shall be based on the seismic event as established by the current version of the International Building Code;

2. New structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;

3. New structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;

4. New structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

5. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;

6. Where the existing natural slope area cannot be retained undisturbed with native vegetation, the use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes; and

7. Development shall be designed to minimize impervious lot coverage and preserve native vegetation and trees to the maximum extent practicable.

G. **Additional Requirements for Alteration of Very High Hazard Landslide Areas.**

1. Prior to application the applicant shall meet the requirements of and conduct a neighborhood meeting for all property owners whose properties adjoin the subject property and properties that include part of the subject property's Very High Risk Landslide Hazard and its standard 50-foot buffer.

2. Prior to permit issuance the property owner shall sign and record on title a covenant with the City which acknowledges and accepts the risks, waives any rights to claims against the City, indemnifies and holds harmless the City against claims, losses, and damages, informs subsequent successors of the property of the risks and the covenant, advisability of obtaining added insurance, and record the covenant on title.

3. Prior to permit issuance the piling and excavation contractors shall submit insurance bonding documentation that include coverage for subsidence and underground property damage, listing the City as an additional insured. The Director may require adequate bonds and/or insurance to cover potential claims for property damage that may arise from or be related to excavation or fill within a landslide-prone area when the depth of the proposed excavation exceeds four feet (4') and the bottom of the proposed excavation is below the one hundred percent (100%) slope line forty-five (45) degrees from a horizontal line) from the property line. The Director may require such bonds and insurance in other circumstances where the Director determines that there is a potential for significant harm to a critical area or buffer during the construction process.

4. During permitted construction on Very High Risk Landslide Hazard Areas and buffers a qualified

professional Geotechnical Special Inspector shall be a third party contractor and authorized as a deputy of the building official to insure that the development is built as permitted and to insure that slope safety problems are prevented.

5. If the building official has reasonable grounds to believe that an emergency exists because significant changes in conditions at a project site or in the surrounding area may have occurred since a permit was issued, increasing the risk of damage to the proposed development, to neighboring properties, or to the drainage basin, the Director may by letter or other reasonable means of notification suspend the permit until the applicant has submitted a letter of certification.

6. The building official may require a letter of certification based on such factors as the presence of known slides, indications of changed conditions at the site or the surrounding area, or other indications of unstable soils.

a. The letter of certification shall be from the current project qualified professional geotechnical engineer of record stating that a qualified professional geotechnical engineer has inspected the site and area surrounding the proposed development within the sixty (60) days preceding submittal of the letter; and that:

b. In the project geotechnical engineer's professional opinion no significant changes in conditions at the site or surrounding area have occurred that render invalid or out-of-date the analysis and recommendations contained in the technical reports and other application materials previously submitted to the City as part of the application for the permit; or that

c. In the project geotechnical engineer's professional opinion, changes in conditions at the site or surrounding area have occurred that require revision to project criteria and that all technical reports and any necessary revised drawings that account for the changed conditions have been prepared and submitted.

~~D~~H. **Alteration of Seismic Hazard Areas.** Development activities and uses in seismic hazard areas may be permitted, not subject to 20.80.050(1), based on review of a critical area report demonstrating that the project is consistent with SMC 20.80.050(2-6). The report must certify that the risk of damage from the proposal, both on-site and off-site, are minimal subject to the conditions set forth in the report, that the proposal will not increase the risk of occurrence of the potential hazard, and that measures to eliminate or reduce risks have been incorporated into the report's recommendations. The report must include the following:

1. For one-story and two-story detached residential structures a qualified professional shall conduct an evaluation of site response and liquefaction potential based on ~~the performance of similar structures with similar foundation conditions~~ current mapping, site reconnaissance, research of nearby studies; or

2. For all other proposals, the applicant shall conduct an evaluation of site response and liquefaction potential including sufficient subsurface exploration to determine the site coefficient for use in the static lateral force procedure described in the International Building Code.

~~E~~I. **Alteration of Erosion Hazard Areas.** Development activities and uses in erosion hazard areas may be permitted, not subject to 20.80.050(1), based on review of a critical area report demonstrating that the project is consistent with SMC 20.80.050(2-6) and the following provisions:

1. ~~Up to 1,500 square feet may be cleared on any lot in an erosion hazard area without a permit, unless the site also contains another type of critical area or any other threshold contained in SMC 20.50.320 would be exceeded.~~

2. ~~—~~All development proposals on sites containing erosion hazard areas shall include a ~~temporary erosion and sediment control~~ stormwater pollution prevention plan consistent with the requirements of the adopted ~~S~~stormwater ~~M~~manual and a ~~revegetation~~ mitigation plan to ensure revegetation and permanent stabilization of the site. Specific requirements for revegetation in mitigation plans shall be ~~determined on~~

~~a case-by-case basis during permit review and administrative guidelines shall be developed by the Department~~ consistent with the mitigation plan requirements in SMC 20.80.082 and the mitigation performance standards for geologic hazard areas in SMC 20.80.250. ~~Critical area r~~Revegetation ~~plans~~ for site stabilization may be combined with required landscape, tree retention, and/or other critical area mitigation plans as appropriate.

2. All subdivisions, short subdivisions or binding site plans on sites with erosion hazard areas shall comply with the following additional requirements:

a. Except as provided in this section, existing vegetation shall be retained on all lots until building permits are approved for development on individual lots;

b. If any vegetation on the lots is damaged or removed during construction of the subdivision infrastructure, the applicant shall be required to implement the revegetation plan in those areas that have been impacted prior to final inspection of the site development permit or the issuance of any building permit for the subject property;

c. Clearing of vegetation on individual lots may be allowed prior to building permit approval if the City ~~of Shoreline~~ determines that:

i. Such clearing is a necessary part of a large scale grading plan,

ii. It is not feasible to perform such grading on an individual lot basis, and

iii. Drainage from the graded area will meet established water quality standards ~~to be established by administrative rules.~~

3. Where the City ~~of Shoreline~~ determines that erosion from a development site poses a significant risk of damage to downstream receiving water, the applicant shall be required to provide regular monitoring of surface water discharge from the site. If the project does not meet water quality standards, the City may suspend further development work on the site until such standards are met.

4. The City may require additional mitigation measures in erosion hazard areas, including, but not limited to, the restriction of major soil-disturbing activities associated with site development between October 1st ~~15th~~ and April 30th ~~15th~~ to meet the stated purpose contained in SMC 20.80.010 and 20.80.210.

5. The use of hazardous substances, pesticides and fertilizers in erosion hazard areas may be prohibited by the City ~~of Shoreline~~.

20.80.230 GEOLOGIC HAZARDS – Required buffer areas.

A. Buffers for geologic hazard area shall be maintained as undisturbed native vegetation consistent with SMC 20.80.090. Building and other improvement setbacks will be required in addition to buffers as recommended by the qualified professional to allow for landscaping, access around structures for maintenance, and location of stormwater facilities at safe distances from geologic hazard areas where native vegetation is not necessary to reduce the risk of the hazard.

B. Required buffer widths for geologic hazard areas shall reflect the sensitivity of the hazard area and the risks associated with development and, in those circumstances permitted by these regulations, the type and intensity of human activity and site design proposed to be conducted on or near the area.

~~B~~C. In determining the appropriate buffer width, the City shall consider the recommendations contained in a geotechnical critical area report required by these regulations ~~and prepared by a qualified consultant~~.

D. For moderate to high landslide hazard areas, the critical area report shall recommend whether buffers should be required and the width of those buffers as well as recommending any additional setbacks for buildings and

stormwater facilities adequate to certify no increase in the risk of the hazard.

~~C~~E. For very high risk landslide hazard areas, the standard buffer shall be 50 feet from all edges of the landslide hazard area. Larger buffers may be required as needed to eliminate or minimize the risk to people and property based on a geotechnical critical area report ~~prepared by a qualified professional~~. The standard buffer may be reduced ~~to a minimum of 15 feet~~ when geotechnical studies demonstrate and the qualified professional certifies that the reduction will not increase the risk of hazard to people or property, on- or off-site, however the minimum shall be 15 feet.

~~D. Landslide hazard area buffers may be reduced to a minimum of 15 feet when technical studies demonstrate that the reduction will not increase the risk of the hazard to people or property on- or off-site.~~

~~E~~F. Landslide hazard areas and their associated buffers shall be placed either in a separate tract on which development is prohibited, protected by execution of an easement, dedicated to a conservation organization or land trust, or similarly preserved through a permanent protective mechanism acceptable to the City. The location and limitations associated with the critical landslide hazard and its buffer shall be shown on the face of the deed or plat applicable to the property and shall be recorded with the King County ~~Department of~~ Recorder's Office ~~and Elections~~. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 3(C), 2000).

~~**20.80.240 Alteration.**~~

~~A. The City shall approve, condition or deny proposals in a geologic hazard area as appropriate based upon the effective mitigation of risks posed to property, health and safety. The objective of mitigation measures shall be to render a site containing a geologic hazard as safe as one not containing such hazard. Conditions may include limitations of proposed uses, modification of density, alteration of site layout and other appropriate changes to the proposal. Where potential impacts cannot be effectively mitigated to eliminate a significant risk to public health, safety and property, or important natural resources, the proposal shall be denied.~~

~~B. **Very High Landslide Hazard Areas.** Development shall be prohibited in very high landslide hazards areas or their buffers except as granted by a critical areas special use permit or a critical areas reasonable use permit.~~

~~C. **Moderate and High Landslide Hazards.** Alterations proposed to moderate and high landslide hazards or their buffers shall be evaluated by a qualified professional through the preparation of the geotechnical report. However, for proposals that include no development, construction, or impervious surfaces, the City, in its sole discretion, may waive the requirement for a geotechnical report. The recommendations contained within the geotechnical report shall be incorporated into the alteration of the landslide hazard area or their buffers.~~

~~The geotechnical engineer and/or geologist preparing the report shall provide assurances that the risk of damage from the proposal, both on-site and off-site, are minimal subject to the conditions set forth in the report, that the proposal will not increase the risk of occurrence of the potential landslide hazard, and that measures to eliminate or reduce risks have been incorporated into the report's recommendations.~~

~~D. **Seismic Hazard Areas.**~~

~~1. For one-story and two-story residential structures, a qualified professional shall conduct an evaluation of site response and liquefaction potential based on the performance of similar structures with similar foundation conditions; or~~

~~2. For all other proposals, the applicant shall conduct an evaluation of site response and liquefaction potential including sufficient subsurface exploration to determine the site coefficient for use in the static lateral force procedure described in the International Building Code.~~

~~E. **Erosion Hazard Areas.**~~

~~1. Up to 1,500 square feet may be cleared on any lot in an erosion hazard area without a permit, unless the site also contains another type of critical area or any other threshold contained in SMC 20.50.320 would be exceeded.~~

~~2. All development proposals on sites containing erosion hazard areas shall include a temporary erosion and sediment control plan consistent with the requirements of the adopted surface water design manual and a revegetation plan to ensure permanent stabilization of the site. Specific requirements for revegetation plans shall be determined on a case-by-case basis during permit review and administrative guidelines shall be developed by the Department. Critical area revegetation plans may be combined with required landscape, tree retention, and/or other critical area mitigation plans as appropriate.~~

~~3. All subdivisions, short subdivisions or binding site plans on sites with erosion hazard areas shall comply with the following additional requirements:~~

~~a. Except as provided in this section, existing vegetation shall be retained on all lots until building permits are approved for development on individual lots;~~

~~b. If any vegetation on the lots is damaged or removed during construction of the subdivision infrastructure, the applicant shall be required to implement the revegetation plan in those areas that have been impacted prior to final inspection of the site development permit or the issuance of any building permit for the subject property;~~

~~c. Clearing of vegetation on individual lots may be allowed prior to building permit approval if the City of Shoreline determines that:~~

~~i. Such clearing is a necessary part of a large scale grading plan,~~

~~ii. It is not feasible to perform such grading on an individual lot basis, and~~

~~iii. Drainage from the graded area will meet water quality standards to be established by administrative rules.~~

~~4. Where the City of Shoreline determines that erosion from a development site poses a significant risk of damage to downstream receiving water, the applicant shall be required to provide regular monitoring of surface water discharge from the site. If the project does not meet water quality standards established by law or administrative rules, the City may suspend further development work on the site until such standards are met.~~

~~5. The City may require additional mitigation measures in erosion hazard areas, including, but not limited to, the restriction of major soil disturbing activities associated with site development between October 15th and April 15th to meet the stated purpose contained in SMC 20.80.010 and 20.80.210.~~

~~6. The use of hazardous substances, pesticides and fertilizers in erosion hazard areas may be prohibited by the City of Shoreline.~~

20.80.240 GEOLOGIC HAZARDS – Critical area report requirements.

A. **Report Required.** If the Director determines that the site of a proposed development includes, is likely to include, or is adjacent to a geologic hazard area, a critical area report shall be required. Critical area report requirements for geologic hazard areas are met through submission to the Director of one or more geologic hazard critical area reports (also referred to as geotech or geotechnical engineering reports). In addition to the general critical areas report requirements of SMC 20.80.080, critical areas reports for geologic hazard areas must meet the requirements of this section. Critical areas reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

B. **Preparation by a Qualified Professional.** Critical areas reports for potential geologic hazard areas shall be prepared, stamped, and signed by a qualified geotechnical engineer or engineering geologist licensed in the state of Washington, with minimum required experience, per SMC 20.20.042, analyzing geologic, hydrologic, and ground water flow systems, and who has experience preparing reports for the relevant type of hazard. If mitigation measures are necessary, the report detailing the mitigation measures and design of the mitigation shall be prepared by a qualified professional with experience stabilizing geologic hazard areas with similar

geotechnical properties and by a qualified vegetation ecologist, landscape architect or arborist with experience designing and monitoring vegetative stabilization of geologic hazard areas.

C. **Third Party Review Required.** Critical areas studies and reports on geologically hazardous areas shall be subject to third party review consistent with SMC 20.80.080(C) and in any of the additional following circumstances:

1. A buffer reduction or alteration of the critical area or buffer is proposed for a very high risk landslide hazard areas; or

2. Mitigation is required within a very high risk landslide hazard area following any alterations allowed in response to emergencies per SMC 20.80.030(A).

D. **Minimum Report Contents for Geologic Hazard Areas.** A critical area report for geologic hazard areas shall include a field investigation and contain an assessment of whether or not each type of geologic hazard identified in SMC 20.80.210 is present or not present and if the proposed development of the site will increase the risk of the hazard on or off site. The written critical area report(s) and accompanying plan sheet(s) shall contain the following information at a minimum:

1. The minimum report contents required per SMC 20.80.080(E);

2. Documentation of any fieldwork performed on the site, including field data sheets for soils, test pit locations, baseline hydrologic data, site photos, etc.;

3. A description of the methodologies used to conduct the geologic hazard areas delineations, classifications, hazards assessments and/or analyses of the proposal impacts including references;

4. **Site and Construction Plans.** The report shall include a copy of the site plans for the proposal, drawn at an engineering scale, showing:

   a. The type and extent of geologic hazard areas, any other critical areas, and buffers on, adjacent to, within 200 feet of, or that are likely to impact or be affected by the proposal;

   b. Proposed development, including the location of existing and proposed structures, fill, significant trees to be removed, vegetation to be removed, storage of materials, and drainage facilities;

   c. The topography, in two-foot contours, of the project area and all hazard areas addressed in the report;

   d. Height of slope, slope gradient, and cross-section of the project area;

   e. The location of springs, seeps, or other surface expressions of ground water on or within 200 feet of the project area or that have the potential to affect or be affected by the proposal;

   f. The location and description of surface water on or within 200 feet of the project area or that have the potential to be affected by the proposal; and

   g. Clearing limits, including required tree protection consistent with SMC 20.50.370.

5. **Stormwater Pollution Prevention Plan (SWPPP)**. For any development proposed with land disturbing activities on a site containing a geologic hazard area, a stormwater pollution prevention plan (also known as an erosion and sediment control plan) shall be required. The SWPPP, in compliance with the requirements of SMC Chapter 13.10, shall be included in the critical area report or be referenced if it is prepared separately.

6. **Assessment of Geological Characteristics.** The report shall include an assessment of the geologic characteristics of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted classification systems in use in the region. The assessment shall include, but not be limited to:

   a. A detailed overview of the field investigations, published data, and references; data and conclusions from past assessments of the site; and site-specific measurements, tests, investigations, or studies that support the identification of geologically hazardous areas; and

   b. A summary of the existing site conditions, including:

      i. the surface topography, existing features, and vegetation found in the project area and in all hazard areas addressed in the report;

      ii. surface and subsurface geology and soils to sufficient depth based on data from site-specific explorations;

      iii. geologic cross-section(s) displaying the critical design slope conditions;

      iv. surface and ground water conditions; and

   c. A description of the vulnerability of the site to seismic and other geologic events.

7. **Analysis of Proposal.** The report shall contain a hazards analysis including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the identified hazard area(s), the subject property, and affected adjacent properties. The hazards analysis component of the critical areas report shall include the following based on the type(s) of geologic hazard areas identified:

   a. An estimate of the present stability of the subject property, the stability of the subject property during construction, the stability of the subject property after all development activities are completed and a discussion of the relative risks and slide potential relating to adjacent properties during each stage of development including the effect construction and placement of structures, clearing, grading, and removal of vegetation will have on the slope over the estimated life of the structure;

   b. An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a one hundred-year storm event;

   c. Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down slope properties.

   d. A study of slope stability including an analysis of proposed cuts, fills, and other site grading;

   e. Recommendations for the minimum buffer consistent with 20.80.230, or as recommended, and recommended minimum drainage and building setbacks from any geologic hazard based upon the geotechnical analysis. Buffers must be maintained consistent with SMC 20.80.090, however the qualified professional may recommend additional setbacks for drainage facilities or structures which do not have to be maintained as undisturbed native vegetation;

   f. An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion; and

E. **Additional Technical Information Requirements for Landslide Hazard Areas**. The technical information required in a critical area report for a project within a landslide hazard area shall also include the following:

a. Compliance with the requirements of SMC 20.80.224(D) for alterations proposed in moderate to high risk landslide hazard areas;

b. Compliance with the requirements of SMC 20.80.22(E-G) for alterations proposed in very high risk landslide hazard areas;

c. Parameters for design of site improvements including appropriate foundations and retaining structures. These should include allowable load and resistance capacities for bearing and lateral loads, installation considerations, and estimates of settlement performance;

d. Recommendations for drainage and subdrainage improvements;

e. Earthwork recommendations including clearing and site preparation criteria, fill placement and compaction criteria, temporary and permanent slope inclinations and protection, and temporary excavation support, if necessary; and

f. Mitigation of adverse site conditions including slope stabilization measures and seismically unstable soils, if appropriate.

F. **Additional Technical Information Requirements for Seismic Hazard Areas.** The technical information required in a critical area report for a project within a seismic hazard area shall also include the following:

a. A complete discussion of the potential impacts of seismic activity on the site (for example, forces generated and fault displacement);

b. Additionally, a geotechnical engineering report for a seismic hazard area shall evaluate the physical properties of the subsurface soils, especially the thickness of unconsolidated deposits and their liquefaction potential. If it is determined that the site is subject to liquefaction, mitigation measures appropriate to the scale of the development shall be recommended and implemented; and

c. Any additional information or analysis necessary to demonstrate compliance with the standards for alteration in seismic hazard areas in SMC 20.80.224(H).

G. **Limited Report Requirements for Stable Erosion Hazard Areas.** When recommended by the qualified professional for sites only overlain by erosion hazard areas with suitable slope stability, and no other type of critical area or buffer, detailed critical areas report requirements may be waived. Report requirements for stable erosion hazard areas may be met through construction documents that shall include at a minimum a stormwater pollution plan prepared in compliance with requirements set forth in SMC Chapter 13.10.

H. **Mitigation of Long-Term Impacts.** When hazard mitigation is required, the mitigation plan shall specifically address how the activity maintains or reduces the preexisting level of risk to the site and adjacent properties on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation). Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function. Mitigation may also be required to avoid any increase in risk above the preexisting conditions following abandonment of the activity.

I. **Additional Information.** When appropriate due to the proposed impacts or the project area conditions, the Director may also require the critical area report to include:

1. Where impacts are proposed, mitigation plans consistent with the requirements of SMC 20.80.082 and the geologic hazards mitigation performance standards and requirements of SMC 20.80.250.

2. A request for consultation with the Washington Department of Fish and Wildlife (DFW) , Washington Department of Ecology (Ecology), local Native American Indian Tribes, or other appropriate agency; and

3. Detailed surface and subsurface hydrologic features both on and adjacent to the site. (Ord. 695 § 1 (Exh. A), 2014; Ord. 398 § 1, 2006; Ord. 352 § 1, 2004; Ord. 324 § 1, 2003; Ord. 299 § 1, 2002; Ord. 238 Ch. VIII § 3(D), 2000).

20.80.250 GEOLOGIC HAZARDS - Mitigation performance standards and requirements.

A. **Requirements for Mitigation.** Mitigation is required for proposed adverse impacts and increased risks of alteration of geologic hazard areas must be sufficient to result in no increased risk of the hazard consistent with the development standards in SMC 20.80.224. Mitigation plans shall be submitted as part of the required critical area report consistent with the requirements of SMC 20.80.080, 20.80.082, and 20.80.240 and this section. When revegetation is required as part of the mitigation, then the standards of SMC 20.80.350(H) shall be applied, excluding those standards that are wetland specific.

B. **Preference of Mitigation Actions.** Methods to achieve mitigation for alterations of geologic hazard areas shall be approached in the following order of preference:

1. **Protection.** Mitigation measure that increase the protection of the identified geologic hazard areas include but are not limited to:

a. Increased or enhanced buffers;

b. Setbacks for permanent and temporary structures;

c. Reduced project scope; and

f. Retention of existing vegetation;

2. **Restoration.** Restoration of native vegetation.

3. **Engineered Stabilization.** Engineered design of geologic hazard stabilization to ensure no increased risk of the hazard due to the proposal with preference for bioengineering over structural engineered solutions.

C. **Performance Standards.** The following performance standards shall apply to any mitigations for development proposed within geologic ~~hazard areas located within the City~~:

~~A. Relevant performance standards from SMC 20.80.080, 20.80.300, 20.80.350 and 20.80.500 as determined by the City, shall be incorporated into mitigation plans.~~

~~B. The following additional performance standards shall be reflected in proposals within geologic hazard areas:~~

1. Geotechnical studies shall be prepared by a qualified ~~consultant~~ professional to identify and evaluate potential hazards and to formulate mitigation measures~~.~~;

2. Construction methods will reduce or not adversely affect geologic hazards~~.~~;

3. Site planning ~~should~~ to minimize disruption of existing topography and natural vegetation~~.~~;

4. Significant trees shall be preserved, unless removal is unavoidable or otherwise allowed under the provisions of this chapter;

~~4~~5. Minimize ~~I~~impervious surface coverage ~~should be minimized~~.

~~5~~6. Replant D~~d~~isturbed areas ~~should be replanted~~ as soon as feasible pursuant to an approved landscape plan. When planting is required, the following standards shall apply:

a. Native species, indigenous to the region, shall be used in any landscaping of disturbed or undeveloped areas and in any enhancement of habitat or buffers;

b. Plant selection shall be consistent with the existing or projected site conditions, including slope aspect, moisture, and shading;

c. Plants should be commercially available or available from local sources;

d. Plant species high in food and cover value for fish and wildlife shall be used;

e. Mostly perennial species should be planted;

f. Committing significant areas of the site to species that have questionable potential for successful establishment shall be avoided;

g. Plant selection, densities, and placement of plants must be determined by a qualified professional and shown on the design plans;

h. Stockpiling soil and construction materials should be confined to upland areas and contract specifications should limit stockpiling of earthen materials to durations in accordance with City clearing and grading standards, unless otherwise approved by the City;

i. Planting instructions shall be submitted which describe placement, diversity, and spacing of seeds, tubers, bulbs, rhizomes, sprigs, plugs, and transplanted stock;

j. Controlled release fertilizer shall be applied (if required) at the time of planting and afterward only as plant conditions warrant as determined during the monitoring process;

k. An irrigation system shall be installed, if necessary, for the initial establishment period; and

l. The heterogeneity and structural diversity of vegetation shall be emphasized in landscaping;

~~6~~7. Clearing and grading regulations as set forth by the City, in SMC 20.50.290 through 20.50.370, shall be followed~~.~~;

~~7~~8. The use of retaining walls that allow maintenance of existing natural slope areas are preferred over graded slopes~~.~~;

~~8~~9. All construction specifications and methods shall be approved by a qualified professional and the City;

10. Construction management shall be provided by a qualified professional. Ongoing work on-site shall be inspected by the City;

11. Site drainage design and t~~T~~emporary erosion and sedimentation controls, pursuant to an approved stormwater pollution prevention plan consistent with the adopted stormwater manual, shall be implemented during and after construction~~.~~;

~~9~~12. Undevelopable geologic hazard areas larger than one-half acre shall be placed in a separate tract, provided this requirement does not make the lot nonconforming~~.~~;

~~10~~13. A monitoring program shall be prepared for construction activities permitted in geologic hazard areas~~.~~; and

~~11. A bond, guarantee or other assurance device approved by the City shall be posted to cover the cost of monitoring, maintenance and any necessary corrective actions.~~

~~12~~14. Development shall not increase instability or create a hazard to the site or adjacent properties, or result in a significant increase in sedimentation or erosion and adequate mitigation must be incorporated in to the project design to comply with the requirements of SMC 20.80.224 and 20.80.230. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 3(E), 2000).

Subchapter 3.

Fish and Wildlife Habitat Conservation Areas

20.80.260 FISH AND WILDLIFE HABITAT - ~~Designation~~ Description and purpose.

A. Fish and wildlife habitat conservation areas (or habitat conservation areas) are lands managed for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term and isolated subpopulations are not created. Fish and wildlife habitat conservation areas include ~~nesting and breeding grounds for~~ areas with which State and Federal designated threatened, endangered, and sensitive species have a primary association as well as ~~critical or~~ priority species and habitats listed by the Washington State Department of Fish and Wildlife, including corridors which connect priority habitat, and those areas which provide habitat for species of local significance which have been or may be identified in the City of Shoreline Comprehensive Plan. Fish and wildlife habitat conservation areas also include stream areas and ~~their associated~~ buffers which provide important ~~fish and wildlife~~ habitat corridors; help maintain water quality; store and convey stormwater and floodwater; recharge groundwater; and serve as areas for recreation, education, ~~and~~ scientific study, and aesthetic appreciation.

B. The purpose of fish and wildlife habitat conservation areas shall be to ~~provide opportunities for food, cover, nesting, breeding and movement for fish and wildlife within the City; maintain and promote diversity of species and habitat within the City; coordinate habitat protection with elements of the City's established open space corridors wherever possible; help to maintain air and water quality; control erosion; provide areas for recreation, education and scientific study and aesthetic appreciation; and contribute to the established character of the City~~ protect and conserve the habitat of fish and wildlife species and thereby maintain or increase their populations. The primary purpose of this section is to minimize development impacts to habitat conservation areas and to:

1. Protect federal and state listed habitats and species and give special attention to protection and enhancement of anadromous fish populations; and

2. Maintain a diversity of species and habitat within the City; and

3. Coordinate habitat protection to maintain and provide habitat connections; and

4. Help maintain air and water quality and control erosion.

~~C. The City of Shoreline has given special consideration to the identification and regulation of fish and wildlife habitat conservation areas that support anadromous fisheries in order to preserve and enhance species which are or may be listed as endangered, threatened or priority species by State and Federal agencies.~~ (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 4(A), 2000).

20.80.270 FISH AND WILDLIFE HABITAT – Classification and designation.

~~A.~~ Fish and wildlife habitat conservation areas are those areas designated by the City based on review of the best available science; input from Washington Department of Fish and Wildlife, Washington Department of Ecology, U.S. Army Corps of Engineers, and other agencies; and any of the following criteria:

~~1~~A. **Areas where State or Federally Designated Endangered, Threatened, and Sensitive Species Have a Primary Association.** ~~The presence of species proposed or listed by the Federal government or the State of Washington as endangered, threatened, critical, or priority; or~~

1. Federally designated endangered and threatened species are those fish and wildlife species identified by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that are in danger of extinction or threatened to become endangered. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service should be consulted for current listing status. Federally designated endangered

and threatened species known to be identified and mapped by DFW in Shoreline include but may not be limited to the following:

a. Chinook *(Oncrhynchus tshawytscha)*;

b. Coho *(Oncrhynchus kisutch)*; and

c. Southern Resident Orca or Killer Whales *(Orcinus orca).*

2. State designated endangered, threatened, and sensitive species are those fish and wildlife species native to the state of Washington identified by the Washington Department of Fish and Wildlife, that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered or threatened in a significant portion of their range within the state without cooperative management or removal of threats. State designated endangered, threatened, and sensitive species are periodically recorded in WAC 232-12-014 (state endangered species) and WAC 232-12-011 (state threatened and sensitive species). The state Department of Fish and Wildlife maintains the most current listing and should be consulted for current listing status. State designated endangered, threatened, and sensitive species known to be identified and mapped by DFW in Shoreline include but may not be limited to the following:

a. Northern goshawk *(Accipiter gentilis)*;

b. Osprey *(Pandion haliaetus)*; and

c. Purple martin *(Progne subis*).

~~2~~B. **State Priority Habitats and Areas Associated With State Priority Species.** ~~The presence of heron rookeries or raptor nesting trees; or~~ Priority habitats and species are considered to be priorities for conservation and management. Priority species require protective measures for their perpetuation due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority habitats are those habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element. Priority habitats and species are identified by the State Department of Fish and Wildlife (DFW). Priority habitats and species known to be identified and mapped by DFW in Shoreline include but may not be limited to the following:

1. Biodiversity areas and corridors identified and mapped along Boeing Creek and in and around Innis Arden Reserve Park;

2. Chinook/Fall Chinook *(Oncrhynchus tshawytscha)*;

3. Coho *(Oncrhynchus kisutch)*;

4. Dungeness crab;

5. Estuarine intertidal aquatic habitat;

6. Geoduck;

7. Northern goshawk *(Accipiter gentilis)*;

8. Pacific sand lance *(Ammodytes hexapterus)*;

9. Purple martin *(Progne subis*);

10. Resident coastal cutthroat *(Oncrhynchus clarki)*;

11. Surf smelt *(Hypomesus pretiosus)*;

12. Waterfowl concentrations at Ronald Bog (Ronald Bog is not a shoreline of the state subject to the SMP); and

13. Winter steelhead *(Oncrhynchus mykiss)*.

C. **Commercial and Recreational Shellfish Areas.** These areas include all public and private tidelands or bedlands suitable for shellfish harvest, including shellfish protection districts established pursuant to Chapter 90.72 RCW.

D. **Kelp and Eelgrass Beds and Herring and Smelt Spawning Areas.**

E. **Waters of the State.** Waters of the state include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington, as classified in WAC 222-16-031.

~~3.~~ Streams ~~and wetlands and their associated buffers that provide significant habitat for fish and wildlife.~~ are those areas where surface waters produce a defined channel or bed, not including irrigation ditches, canals, storm or surface water runoff devices or other entirely artificial watercourses, unless they are used by fish or are used to convey streams naturally occurring prior to construction. A channel or bed need not contain water year-round; provided that there is evidence of at least intermittent flow during years of normal rainfall. Streams shall be classified in accordance with the Washington Department of Natural Resources water typing system (WAC 222-16-030) hereby adopted in its entirety by reference and summarized as follows:

1. **Type S:** streams inventoried as "shorelines of the state" under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW;

2. **Type F:** streams which contain fish habitat;

3. **Type Np:** perennial nonfish habitat streams;

4. **Type Ns:** seasonal nonfish habitat streams; and

5. **Piped stream segments:** those segments of streams, regardless of their type, that are fully enclosed in an underground pipe or culvert.

6. Not all streams that are known to exist with fish habitat support anadromous fish populations, or have the potential for anadromous fish occurrence because of obstructions, blockages or access restrictions resulting from existing conditions. Therefore, in order to provide special consideration of and increased protection for anadromous fish in the application of development standards, Shoreline streams shall be further classified as follows:

a. **Anadromous fishbearing streams.** These streams include:

i. Streams where naturally recurring use by anadromous fish populations has been documented by a government agency;

ii. Streams that are fish passable or have the potential to be fish passable by anadromous populations, including those from Lake Washington or Puget Sound, as determined by a qualified professional based on review of stream flow, gradient and natural barriers (i.e. natural features that exceed jumping height for salmonids), and criteria for fish passability established by the Washington Department of Fish and Wildlife; and

iii. Streams that are planned for restoration in a six-year capital improvement plan adopted by a

government agency or planned for removal of the private dams that will result in a fish passable connection to Lake Washington or Puget Sound; and

b. **Nonanadromous fishbearing streams.** These include streams which contain existing or potential fish habitat, but do not have the potential for anadromous fish use due to natural barriers to fish passage, including streams that contain resident or isolated fish populations.

The general areas and stream reaches with access for anadromous fish are indicated in the City of Shoreline Stream and Wetland Inventory and Assessment (2004) and basin plans. The potential for anadromous fish access shall be confirmed in the field by a qualified professional as part of a critical area report.

~~B~~F. The City designates ~~the following fish and wildlife habitat conservation~~ all areas that meet one or more of the above criteria, regardless of any formal identification, as critical areas and as such they are subject to the provisions of this chapter. They shall be managed consistent with best available science; including the Washington State Department of Fish and Wildlife's Management Recommendations for Priority Habitat and Species. The following fish and wildlife habitat conservation areas are specifically designated and this designation does not preclude designation of additional areas as provided in subsection (A) of this section:

1. All regulated streams ~~and wetlands~~ and their associated buffers as determined by a qualified specialist.

2. The waters, bed and shoreline of Puget Sound up to the ordinary high water mark. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 4(B), 2000).

20.80.272 FISH AND WILDLIFE HABITAT - Mapping.

A. **Mapping.** The approximate location and extent of fish and wildlife habitat areas are shown in the following maps and inventories herby adopted:

1. Washington Department of Fish and Wildlife Priority Habitat and Species maps;

2. Washington State Department of Natural Resources, Official Water Type Reference maps, as amended;

3. Washington State Department of Natural Resources Puget Sound Intertidal Habitat Inventory maps;

4. Washington State Department of Natural Resources Shorezone Inventory;

5. Washington State Department of Natural Resources Natural Heritage Program mapping data;

6. Washington State Department of Health Annual Inventory of Shellfish Harvest Areas;

7. Anadromous and resident salmonid distribution maps contained in the Habitat Limiting Factors reports published by the Washington Conservation Commission;

8. Washington State Department of Natural Resources State Natural Area Preserves and Natural Resource Conservation Area maps; and

9. Fish and Wildlife habitat data layers, such as stream and wetland data, maintained in the City of Shoreline geographic information system (GIS).

B. The inventories and cited resources are to be used as a guide for the City of Shoreline, project applicants, and/or property owners, and may be continuously updated as new fish and wildlife habitat conservation areas are identified or critical area reports are submitted for known habitat conservation areas. They are a reference and do not provide a final critical area designation.

20.80.274 FISH AND WILDLIFE HABITAT - General development standards.

A. Activities and uses shall be prohibited in fish and wildlife habitat conservation areas and associated buffers, except as provided for in this subchapter. Unless specifically exempted under SMC 20.80.030 and or allowed under 20.80.040 or subsection C below or SMC 20.80.276, development activities and uses that result in alteration of fish and wildlife habitat conservation areas shall be subject to the critical area reasonable use and special use provisions of SMC 20.30.333 and 20.30.336 or subject to the provisions of the Shoreline Master Program where located within the shoreline jurisdiction.

B. Any proposed alterations permitted, consistent with special use or reasonable use review, to fish and wildlife habitat conservation area shall require the preparation of a habitat conservation area mitigation plan (commonly referred to as a habitat management plan to mitigate for the adverse impacts of the proposal, consistent with the requirements of the Washington State Department of Fish and Wildlife Priority Habitat Program. The habitat management plan shall be prepared by a qualified professional and reviewed and approved by the City, consistent with the standards for mitigation plans in SMC 20.80.082 and 20.80.300.

C. **Activities Allowed in Fish and Wildlife Habitat Conservation Areas.** These activities listed below are allowed in fish and wildlife habitat conservation areas subject to applicable permit approvals. Additional exemptions are listed in the provisions of SMC 20.80.030 and 20.80.040. These activities do not require the submission of a critical area report and are exempt from monitoring and financial guarantee requirements, except where such activities result in a loss of the functions and values of a fish and wildlife habitat conservation area or related buffer. These activities include:

1. Conservation or preservation of soil, water, vegetation, fish, shellfish, and/or other wildlife that does not entail changing the structure or functions of the existing habitat conservation area.

2. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the habitat conservation area by changing existing topography, water conditions, or water sources.

3. Permitted alteration to a legally constructed structure existing within a fish and wildlife habitat conservation area buffer that does not increase the footprint of the development or hardscape or increase the impact to a fish and wildlife habitat conservation area.

4. Buildings and structures (excluding fences and arbors) are prohibited within the required 10 foot stream buffers for a piped stream segment. Other development activities, such as paving, stormwater facilities, clearing (including tree removal) and grading are allowed if no other critical area or buffer is present.

D. **Non-indigenous Species.** No plant, wildlife, or fish species not indigenous to the region shall be introduced into a fish and wildlife habitat conservation area unless authorized by a state or federal permit or approval.

E. **Mitigation and Contiguous Corridors.** Mitigation sites shall be located to preserve or achieve contiguous wildlife habitat corridors in accordance with a mitigation plan that is part of an approved critical area report to minimize the isolating effects of development on habitat areas, so long as mitigation of aquatic habitat is located within the same aquatic ecosystem as the area disturbed.

F. **Approvals of Activities.** The Director shall condition approvals of activities allowed within or adjacent to a habitat conservation area or its buffers, as necessary to minimize or mitigate any potential adverse impacts. Conditions shall be based on the best available science and may include, but are not limited to, the following:

1. Establishment of buffers;

2. Preservation of important vegetation and/or habitat features such as snags and downed wood specific to

the priority wildlife species in the habitat conservation area;

3. Limitation of access to the habitat area, including fencing to deter unauthorized access;

4. Seasonal restriction of construction activities;

5. Establishment of a duration and timetable for periodic review of mitigation activities; and

6. Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation.

G. **Mitigation and Equivalent or Greater Biological Functions.** Mitigation of alterations to habitat conservation areas shall achieve equivalent or greater biologic and hydrologic functions and shall include mitigation for adverse impacts upstream from, downstream from, or within the same shoreline reach as the development proposal site. Mitigation shall address each function affected by the alteration to achieve functional equivalency or improvement on a per function basis. Mitigation shall be located on-site except when demonstrated that a higher level of ecological functioning would result from an off-site location. Mitigation shall be detailed in a fish and wildlife habitat conservation area mitigation plan consistent with the requirements of SMC 20.80.300.

H. **Approvals and the Best Available Science.** Any approval of alterations or impacts to a habitat conservation area shall be supported by the best available science.

I. **Buffers.**

1. **Establishment of Buffers.** The Director shall require the establishment of buffer areas for activities adjacent to habitat conservation areas in order to protect habitat conservation areas. Buffers shall consist of an undisturbed area of native vegetation or areas identified for restoration established to protect the integrity, functions, and values of the affected habitat. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby and shall be consistent with the management recommendations issued by the Washington Department of Fish and Wildlife.

2. **Seasonal Restrictions.** When a species is more susceptible to adverse impacts during specific periods of the year, seasonal restrictions may apply. Larger buffers may be required and activities may be further restricted during the specified season.

3. **Habitat Buffer Averaging.** The Director may allow the recommended habitat area buffer width to be reduced in accordance with a critical area report, the best available science, and the management recommendations issued by the Washington Department of Fish and Wildlife, only if:

a. It will not reduce stream or habitat functions;

b. It will not adversely affect fish and wildlife habitat;

c. It will provide additional natural resource protection, such as buffer enhancement;

d. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer; and

e. The buffer area width is not reduced by more than twenty-five percent (25%) in any location.

J. **Signs and Fencing of Habitat Conservation Areas.**

1. **Temporary Markers.** The outer perimeter of the fish and wildlife habitat conservation area or buffer and the clearing limits identified by an approved permit or authorization shall be marked in the field with temporary “clearing limits” fencing in such a way as to ensure that no unauthorized intrusion will occur.

The marking is subject to inspection by the Director prior to the commencement of permitted activities during the preconstruction meeting required under SMC 20.50.330(E). This temporary marking and fencing shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

2. **Permanent Signs.** As a condition of any permit or authorization issued pursuant to this chapter, the Director may require that applicant to install permanent signs along the boundary of a habitat conservation area or buffer, when recommended in a critical area report or otherwise required by the provisions of this chapter.

a. Permanent signs shall be made of an enamel-coated metal face and attached to a metal post or another material of equal durability and nonhazardous material. Signs must be posted at an interval of one per lot or every fifty (50) feet, whichever is less and must be maintained by the property owner in perpetuity. The signs shall be worded consistent with the text specified in SMC 20.80.110 or with alternative language approved by the Director.

b. The provisions of subsection (a) of this section may be modified as necessary to assure protection of sensitive features or wildlife.

3. **Fencing.** Fencing installed as part of a proposed activity or as required in this subsection shall be design so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes habitat impacts. Permanent fencing shall be required at the outer edge of the critical area buffer under the following circumstances, provided that the Director may waived this requirement:

a. As part of any development proposal for subdivisions, short plats, multifamily, mixed use, and commercial development where the Director determines that such fencing is necessary to protect the functions of the critical area, provided that breaks in permanent fencing may be allowed for access to allowed uses (SMC 20.80.274(C) and 20.80.280(D));

b. As part of development proposals for parks where the adjacent proposed use is active recreation and the Director determines that such fencing is necessary to protect the functions of the critical area;

c. When buffer averaging is part of a development proposal;

d. When buffer reductions are part of a development proposal; or

e. At the Director's discretion to protect the values and functions of a critical area as demonstrated in a critical area report. If found to be necessary, the Director shall condition any permit or authorization issued pursuant to this chapter to require the applicant to install a permanent fence at the edge of the habitat conservation area or buffer, when fencing will prevent future impacts to the habitat conservation area.

f. The applicant shall be required to install a permanent fence around the habitat conservation area or buffer when domestic grazing animals, only as allowed under SMC 20.40.240, are present or may be introduced on site.

K. **Subdivisions.** The subdivision and short subdivision of land in fish and wildlife habitat conservation areas and associated buffers is subject to the following:

1. Land that is located wholly within a habitat conservation area or its buffer may not be subdivided;

2. Land that is located partially within a habitat conservation area or its buffer may be divided provided that the developable portion of each new lot and its access is located outside of the habitat conservation area or

its buffer and meets the minimum lot size requirements of SMC 20.50.020.

3. Access roads and utilities serving the proposed subdivision may be permitted within the habitat conservation area and associated buffers only if the applicant's qualified professionals demonstrate and the City determines that no other feasible alternative exists, all unavoidable impacts are fully mitigated, and when consistent with this chapter.

20.80.276 FISH AND WILDLIFE HABITAT – Specific habitat development standards.

In addition to the provision in SMC 20.80.274, the following development standards apply to the specific habitat types identified below.

A. Endangered, Threatened, and Sensitive Species.

1. No development shall be allowed within a fish and wildlife habitat conservation area or buffer with which state or federally endangered, threatened, or sensitive species have a primary association, except that which is provided for by a management plan established by the Washington Department of Fish and Wildlife or applicable state or federal agency.

2. Whenever activities are proposed adjacent to a fish and wildlife habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area shall be protected through the application of protection measures in accordance with a critical area report prepared by a qualified professional and approved by the City. Approval for alteration of land adjacent to the habitat conservation area or its buffer shall not occur prior to consultation with the Washington Department of Fish and Wildlife for animal species, the Washington State Department of Natural Resources for plant species, and other appropriate federal or state agencies.

B. **Anadromous Fish.**

1. All activities, uses, and alterations proposed to be located in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:

   a. Subsection A above applies to anadromous fish where those populations are identified as endangered, threatened or sensitive species;

   b. Activities shall be timed to occur only during the allowable work window as designated by the Washington Department of Fish and Wildlife for the applicable species;

   c. An alternative alignment or location for the activity is not feasible;

   d. The activity is designed so that it will not degrade the functions or values of the fish habitat or other critical areas;

   e. Shoreline erosion control measures shall be designed to use bioengineering methods or soft armoring techniques, according to an approved critical area report; and

   f. Any impacts to the functions or values of the habitat conservation area are mitigated in accordance with an approved critical area report.

2. Structures that prevent migration shall not be allowed in the portion of water bodies currently or historically used by anadromous fish. Fish bypass facilities shall be provided, consistent with RCW 77.57.030, that allow the upstream migration of adult fish and shall prevent fry and juveniles migrating downstream from being trapped or harmed.

3. Fills, when authorized by the City and all applicable Joint Aquatic Resource Permit Application approvals, shall not adversely impact anadromous fish or their habitat or shall mitigate any unavoidable

impacts and shall only be allowed for a water-dependent use.

C. **Wetland Habitats.** All proposed activities within or adjacent to habitat conservation areas containing wetlands shall conform to the wetland development performance standards set forth in SMC Chapter 20.80, Subchapter 4. Wetlands. If non-wetlands habitat and wetlands are present at the same location, the provisions of this subchapter or the Wetlands subchapter, whichever provides greater protection to the habitat, apply.

D. **Streams.** Activities, uses and alterations of streams shall be prohibited subject to the reasonable use provisions (SMC 20.30.336) or special use provisions (SMC 20.30.333), unless otherwise allowed by the exemptions or allowed activities provisions of this chapter, or subject to the provisions of the Shoreline Master Program, SMC Title 20, Division II. No alteration to a stream buffer shall be permitted unless consistent with the provisions of this chapter and the specific standards for development outlined below.

1. **Type S and Type F-anadromous streams.** Development activities and uses that result in alteration of Type S and Type F-anadromous streams and their associated buffers shall be prohibited subject to the critical area reasonable use and critical area special use provisions of SMC 20.30.333 and 20.30.336, unless otherwise allowed by the exemptions or allowed activities provisions of this chapter, or subject to the provisions of the Shoreline Master Program, SMC Title 20, Division II, where the proposed development activity is located within the shoreline jurisdiction.

2. **Type F-nonanadromous and Type Np streams.** Development activities and uses that result in alteration of Type F-nonanadromous and Type Np streams are prohibited subject to the critical area reasonable use and critical area special use provisions of SMC 20.30.333 and 20.30.336, unless otherwise allowed by the exemptions or allowed activities provisions of this chapter, or subject to the provisions of the Shoreline Master Program, SMC Title 20, Division II, where the proposed development activity is located within the shoreline jurisdiction.

3. **Type Ns streams.** Development activities and uses that result in unavoidable impacts may be permitted in Type Ns streams and associated buffers in accordance with an approved critical area(s) report and compensatory mitigation plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives. Full compensation for the loss of acreage and functions of wetland and buffers shall be provided in compliance with the mitigation performance standards and requirements of these regulations.

4. **Stream Crossing.** Crossing of streams may be permitted based on the findings in a critical area report, subject to the limitation in subsections 1, 2, and 3 above, and consistent with the following:

~~A~~a. **Bridges.** Bridges shall be used to cross Type ~~I~~S and Type F-anadromous streams. Culverted crossings and other obstructive means of crossing Type ~~I~~S and Type F-anadromous streams shall be prohibited; and

~~B~~b. **Culverts.** Culverts are allowable ~~only under the following circumstances~~ for crossing of Type F-nonanadromous, Np, and Ns streams when fish passage will not be impaired and when the following design criteria and conditions are met:

~~a~~i. Oversized culverts, that allow for fish passage and floodplain or wetland connectivity, will be installed;

~~b~~ii. Culverts ~~will include gradient controls and creation of pools within the culvert~~ for Type ~~II~~F streams must be designed for fish passage that will allow natural stream functions and processes to occur (i.e. sediment, wood, and debris transport) where appropriate; ~~and~~

~~c~~iii. Gravel substrate will be placed in the bottom of the culvert to a minimum depth of one foot for Type F streams;

~~4~~iv. A maintenance covenant shall be recorded on title with King County that requires the

property owner to at all times, keep any culvert free of debris and sediment to allow free passage of water and, if applicable, fish.; and

Cv. The City may require that a culvert be removed from a stream as a condition of approval, unless it is demonstrated conclusively that the culvert is not detrimental to fish habitat or water quality, or removal would be detrimental to fish or wildlife habitat or water quality.

G5. **Relocation.** Relocation of a Type I, II, or III S, F, or Np stream shall may be allowed, subject to the limitation in subsections 1 and 2 above, and only when the proposed relocation is part of an approved mitigation or rehabilitation plan, will result in equal or better habitat and water quality, and will not diminish the flow capacity of the stream. Relocation of a Type IV Ns stream may be allowed, subject to the limitation in subsections 3 above, and only when the proposed relocation will result in equal or better habitat and water quality and will not diminish the flow capacity of the stream.

H6. **Restoring Piped Watercourses.** The City allows the voluntary opening of previously channelized/culverted streams and the rehabilitation and restoration of streams, especially on public property or when a property owner is a proponent in conjunction with new development. Restoring piped watercourses may be approved consistent with the following:

2a. When piped watercourse sections are restored, a protective buffer shall be required of the stream section. The buffer distance shall be based on an approved restoration plan, regardless of stream classification, and shall be a minimum of 10 to 25 feet, based on a restoration plan at the discretion of the Director, to allow for restoration and maintenance consistent with the buffer relief that may be granted consistent with SMC 20.80.055 *Voluntary critical area restoration projects*. The stream and buffer area shall include habitat improvements and measures to prevent erosion, landslide, and water quality impacts. Opened channels shall be designed to support fish and wildlife habitat and all uninhibited fish access, unless determined to be unfeasible as demonstrated in a restoration plan reviewed and approved by the City;

3b. Removal of pipes conveying streams shall only occur when the City determines that the proposal will result in a new improvement of water quality and ecological functions and will not significantly increase the threat of erosion, flooding, slope stability, or other hazards; and

c. Where the buffer of the restored stream would extend beyond a required setback on onto an adjacent property, the applicant shall obtain a written agreement from the affected neighboring property owner prior to the City approving the restoration of the piped watercourse.

20.80.280 FISH AND WILDLIFE HABITAT - Required buffer areas.

A. Buffer widths for fish and wildlife habitat areas shall be based on consideration of the following factors: species-specific recommendations of the Washington State Department of Fish and Wildlife; recommendations contained in a habitat management plan submitted by a qualified consultant professional; and the nature and intensity of land uses and activities occurring on the land adjacent to the site.

B. Low impact uses and activities which are consistent with the purpose and function of the habitat buffer and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the habitat area. Examples of uses and activities which may be permitted in appropriate cases include trails that are pervious, viewing platforms, low impact stormwater management facilities such as bio-swales, utility easements and other similar uses and activities; provided, that any impacts to the buffer resulting from such permitted facilities shall be fully mitigated.

AC. **Standard Required Stream Buffer Widths.** Buffer widths shall reflect the sensitivity of the stream type, the risks associated with development and, in those circumstances permitted by these regulations, the type and intensity of human activity and site design proposed to be conducted on or near the stream area. Stream buffers shall be measured from the ordinary high water mark (OHWM) or the top of the bank, if the OHWM cannot be determined. Buffers shall be measured with rounded ends where streams enter or exit piped segments.

~~B~~1. The following buffers are established for streams based upon the Washington State Department of Natural Resources water typing system and further classification based on anadromous or nonanadromous fish presence for the Type F streams:

Table 20.80.280(1)

Stream Type	Standard Buffer Width (ft)
Type S	150
Type F - anadromous	115
Type F - nonanadromous	75
Type Np	65
Type Ns	45
Piped Stream Segments	10

2. **Increased Stream Buffer Widths.** The recommended stream buffer widths shall be increased, as follows:

a. When the qualified professional determines that the recommended width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area;

b. When the flood hazard area exceeds the recommended stream buffer width, the stream buffer area shall extend to the outer edge of the flood hazard area;

c. When a channel migration zone is present, the stream buffer width shall be measured from the outer edge of the channel migration zone;

d. When the habitat area is in an area of high blowdown potential, the stream buffer width shall be expanded an additional fifty (50) feet on the windward side; or

e. When the habitat area is within an erosion or landslide hazard area, or buffer, the stream buffer width shall be the recommended distance, or the erosion or landslide hazard area or buffer, whichever is greater.

3. **Stream Buffer Width Averaging with Enhancement.** The Director may allow the recommended stream buffer width to be reduced in accordance with an approved critical area report and the best available science on a case-by-case basis by averaging buffer widths. Any allowance for averaging buffer widths shall only be granted based on the development and implementation of a buffer enhancement plan for areas of buffer degradation consistent with the provisions in subsection 4 below. Only those portions of the stream buffer existing within the project area or subject parcel shall be considered in the total buffer area for buffer averaging. Averaging of buffer widths may only be allowed where a qualified professional demonstrates that:

a. The width reduction and buffer enhancement plan provides evidence that the stream or habitat functions, including those of nonfish habitat and riparian wildlife, will be;

i. Increased or maintained through plan implementation for those streams where existing buffer vegetation is generally intact native vegetation; or

ii. Increased through plan implementation for those streams where existing buffer vegetation is inadequate to protect the functions and values of the stream;

b. The total area contained in the buffer area of each stream on the development proposal site is not decreased after averaging;

c. The recommended riparian habitat area width is not reduced by more than twenty-five percent (25%) in any one location; and

d. The width reduction will not be located within another critical area or associated buffer.

~~C~~4. **Stream Buffer Enhancement Measures**. The measures determined most applicable and/or appropriate will be considered in ~~reducing~~ buffer averaging requirements. These include but are not limited to:

~~1~~a. Removal of fish barriers to restore accessibility to ~~anadromous~~ fish.

~~2~~b. Enhancement of fish habitat using log structures incorporated as part of a fish habitat enhancement plan.

~~3~~c. Enhancement of fish and wildlife habitat structures that are likely to be used by wildlife, including wood duck houses, bat boxes, nesting platforms, snags, rootwads/stumps, birdhouses, and heron nesting areas.

~~4~~d. Additional enhancement measures may include:

~~a~~i. Planting native vegetation within the buffer area, especially vegetation that would increase value for fish and wildlife, increase stream bank or slope stability, improve water quality, or provide aesthetic/recreational value; or

~~b~~ii. Creation of a surface channel where a stream was previously underground, in a culvert or pipe. Surface channels which are "daylighted" shall be located within a buffer area and shall be designed with energy dissipating functions or channel roughness features such as meanders and rootwads to reduce future ~~erosion~~ bank failures or nearby flooding;

~~c~~iii. Removal or modification of existing stream culverts (such as at road crossings) to improve fish passage, stream habitat, and flow capabilities; or

~~d~~iv. Upgrading of retention/detention facilities or other drainage facilities beyond required levels.

D. **Stream Buffer Allowed Uses and Alteration.** Activities and uses shall be prohibited in stream buffers, except as provided for in this chapter. Stream buffers shall be maintained as undisturbed or restored natural vegetation. No clearing or grading activities are allowed within required stream buffers except as allowed under SMC 20.80.030, 20.80.040, 20.80.274, or consistent with an approved buffer enhancement plan consistent with the provisions of this subchapter. No structures or improvements shall be permitted within the stream buffer area, including buildings, decks, docks, except as otherwise permitted or required under the Shoreline Master Program, SMC Title 20, Division II, or under one of the following circumstances:

1. When the improvements are part of an approved rehabilitation or mitigation plan; or

2. For the construction of new roads and utilities, and accessory structures, when no feasible alternative location exists; or

3. **Trails.** The construction of trails over and in the buffer of piped stream segments, and the construction of trails near other stream segments consistent with the following criteria:

a. Trails should be constructed of ~~permeable materials~~ pervious surface, with preference for natural materials. Raised boardwalks utilizing nontreated pilings may be acceptable;

b. Trails shall be designed in a manner that minimizes impact on the stream system;

c. Trails shall have a maximum trail corridor width of ~~10~~5 feet; and

d. Trails should be located within the outer ~~half~~ 25 percent of the buffer, i.e., that portion of the buffer that is farther away from the stream and located to avoid removal of significant trees; or

4. The construction of footbridges that minimize the impact to the stream system; or

5. **Informational Signs.** The construction and placement of informational signs or educational demonstration facilities limited to no more than one square yard surface area and four feet high, provided there is no permanent infringement on stream flow; or

6. **Stormwater Management Facilities.** The establishment of low impact stormwater management facilities, such as stormwater dispersion outfalls and bioswales, ~~over and in the buffer of piped stream segments and when located outside of the minimum buffer area of other stream segments as set forth in the Table 20.80.480(B).~~may be allowed within stream buffers consistent with the adopted stormwater manual; provided that:

a. No other location is feasible;

b. Pipes and conveyance facilities will be in in the outer twenty-five percent (25%) of the standard buffer area as set forth in Table 20.80.280(1);

c. Stormwater dispersion outfalls, bioswales, bioretention facilities, and other low impact facilities consistent with the adopted stormwater manual may be allowed anywhere within stream buffers when determined by a qualified professional that the location of the facility will enhance the buffer area and protect the stream; and

d. Such facilities are designed consistent with the requirements of SMC 20.70.330.

7. **Development Proposals within Physically Separated and Functionally Isolated Stream Buffers.** Consistent with the definition of "buffers" (SMC 20.20.012), areas that are functionally isolated and physically separated from stream due to existing, legally established roadways and railroads or other legally established structures or paved areas eight (8) feet or more in width that occurs between the area in question and the stream shall be considered physically isolated and functionally separated stream buffer. Once determined by the Director based on a submitted critical area report to be a physically separated and functionally isolated stream buffer, development proposals shall be allowed in these areas.

~~C. Fish and wildlife habitat conservation areas and their associated buffers shall be placed either in a separate tract on which development is prohibited, protected by execution of an easement, dedicated to a conservation organization or land trust, or similarly preserved through a permanent protective mechanism acceptable to the City. The location and limitations associated with the critical habitat and its buffer shall be shown on the face of the deed or plat applicable to the property and shall be recorded with the King County Department of Records and Elections.~~ (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 4(C), 2000).

~~20.80.290 Alteration.~~

~~A. Alterations of fish and wildlife habitat conservation areas shall be avoided, subject to the reasonable use provision section (SMC 20.30.336) or special use permit section (SMC 20.30.333).~~

~~B. Any proposed alterations permitted, consistent with special use or reasonable use review, to fish and wildlife habitat conservation area shall require the preparation of a habitat management plan, consistent with the requirements of the Washington State Department of Fish and Wildlife Priority Habitat Program. The habitat management plan shall be prepared by a qualified consultant and reviewed and approved by the City.~~ (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 4(D), 2000).

20.80.290 FISH AND WILDLIFE HABITAT - Critical area report requirements.

A. **Report Required.** If the Director determines that the site of a proposed development includes, is likely to include, or is adjacent to a fish and wildlife habitat conservation area, a critical area report shall be required. Critical area report requirements for fish and wildlife habitat conservation areas are generally met through submission to the Director of one or more fish and wildlife habitat critical area reports. In addition to the general critical area report requirements of SMC 20.80.080, critical area reports for fish and wildlife habitat conservation areas must meet the requirements of this section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

B. **Preparation by a Qualified Professional.** Critical areas reports for a habitat conservation area shall be prepared and signed by a qualified professional who is a biologist, ecologist, or other scientist with the minimum required experience, per SMC 20.20.042, related to the specific type(s) of fish and wildlife habitats identified.

C. **Third Party Review Required.** Critical areas studies and reports on fish and wildlife habitat conservation areas shall be subject to third party review consistent with SMC 20.80.080(C) and in any of the additional following circumstances:

1. Mitigation is required for impacts to Type S, Type F, or Type Np streams and/or buffers; or

2. Mitigation is required for impacts to Type Ns streams.

D. **Minimum Report Contents for Fish and Wildlife Habitat Conservation Areas.** The written critical area report(s) and accompanying plan sheet(s) shall contain the following information at a minimum:

1. The minimum report contents required per SMC 20.80.080(E);

2. Documentation of any fieldwork performed on the site, including field data sheets for delineations, water typing and other habitat conservation area classification, baseline hydrologic data, site photos, etc.~~,~~;

3. A description of the methodologies used to conduct the delineations, classifications, or impact analyses including reference;

4. **Site Plans.** A copy of the site plan sheet(s) for the project must be included with the written report and must include, at a minimum:

a. Maps (to scale) depicting delineated and surveyed fish and wildlife habitat conservation areas and required buffers on site, including buffers for off-site critical areas that extend onto the project site; the development proposal; other critical areas; clearing and grading limits; areas of proposed impacts to fish and wildlife habitat conservation areas and/or buffers (include square footage estimates); and

b. A depiction of the proposed stormwater management facilities and outlets (to scale) for the development, including estimated areas of intrusion into the buffers of any critical areas. The written report shall contain a discussion of the potential impacts to the fish and wildlife habitat conservation areas associated with anticipated hydroperiod alterations from the project.

5. **Habitat Assessmen**t. A habitat assessment is an investigation of the project area to evaluate the potential presence or absence of designated critical fish or wildlife species or habitat. A critical area report for a habitat conservation area shall contain an assessment of habitats including the following site- and proposal-related information at a minimum:

a. Detailed description of vegetation on and adjacent to the project area and its associated buffer;

b. Identification of any species of local importance, priority species, or endangered, threatened, sensitive, or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;

c. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area;

d. A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;

e. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with SMC 20.80.055 ;

f. A discussion of ongoing management practices that will protect habitat after the project site has been developed, including proposed monitoring and maintenance programs; and

6. **Additional Technical Information Requirements for Streams.** Critical area reports for streams must be consistent with the specific development standards for streams in SMC 20.80.276 and 20.80.280 and may be met through submission of one or more specific report types. If stream buffer enhancement is proposed to average stream buffer width, a stream buffer enhancement plan must be submitted in addition to other critical area report requirements of this section. If no project impacts are anticipated and standard stream buffer width are retained, a stream delineation report, general critical areas report or other reports alone or in combination may be submitted as consistent with the specific requirements of this section. In addition to the basic critical area report requirements for fish and wildlife habitat conservation areas provided in subsections (A) through (C) of this section, technical information on streams shall include the following information at a minimum:

a. A written assessment and accompanying maps of the stream and associated hydrologic features within 200 feet of the project area, including the following information at a minimum:

i. Stream survey showing the field delineated ordinary high water mark(s);

ii. Standard stream buffer boundary;

iii. Boundary for proposed stream buffers averaging, if applicable;

iv. Vegetative, faunal, and hydrologic characteristics;

v. Soil and substrate conditions; and

vi. Topographic elevations, at two-foot contours;

b. A detailed description and functional assessment of the stream buffer under existing conditions pertaining to the protection of stream functions, fish habitat and, in particular, potential anadromous fisheries;

c. A habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and stream functions;

d. Proposed buffer enhancement, if needed, including a written assessment and accompanying maps and planting plans for buffer areas to be enhanced, including the following information at a minimum:

i. A description of existing buffer conditions;

ii. A description of proposed buffer conditions and how proposed conditions will increase buffer functions in terms of stream and fish habitat protection;

iii. Performance standards for measuring enhancement success through a monitoring period of at least five years; and

iv. Provisions for monitoring and submission of monitoring reports documenting buffer conditions as compared to performance standards for enhancement success;

e. A discussion of ongoing management practices that will protect stream functions and habitat value through maintenance of vegetation density within the stream buffer.

E. **Additional Information.** When appropriate due to the type of habitat or species present or the project area conditions, the Director may also require the critical area report to include:

1. Where impacts are proposed, mitigation plans consistent with the requirements of SMC 20.80.082 and the fish and wildlife habitat mitigation performance standards and requirements of SMC 20.80.300.

2. Third party review to include any recommendations as appropriate by a qualified professional under contract with or employed by the City may be required at the applicant's expense of the critical area report analysis and the effectiveness of any proposed mitigating measures or programs;

3. A request for consultation with the Washington Department of Fish and Wildlife (DFW), Washington Department of Ecology (Ecology), local Native American Indian Tribes or other appropriate agency;

4. Copies of the Joint Aquatic Resource Permit Application (JARPA) and related approvals, such as a Hydraulic Project Approval (HPA) from the DFW, when applicable to the project; and

5. Detailed surface and subsurface hydrologic features both on and adjacent to the site.

20.80.300 FISH AND WILDLIFE HABITAT - Mitigation performance standards and requirements.

A. **Requirements for Mitigation.** Where impacts cannot be avoided, and the applicant has exhausted feasible design alternatives, the applicant or property owner shall seek to implement other appropriate mitigation actions in compliance with the intent, standards and criteria of this section. Mitigation provisions shall be applied through the critical area reasonable use or critical area special use provisions in SMC 20.30.333 and 20.30.336, or subject to the provisions of the Shoreline Master Program, SMC Title 20, Division II, where the proposed development activity is located within the shoreline jurisdiction, unless mitigated alterations are specifically allowed by the provisions of this subchapter. In an individual case, these actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal, and/or implementation of the performance standards listed in this section.

B. **Additional Requirements for Stream Mitigation.** Significant adverse impacts to stream area functions and values shall be mitigated. Mitigation actions shall be implemented in the preferred sequence: Avoidance, minimization, restoration and replacement. Proposals which include less preferred and/or compensatory mitigation shall demonstrate that:

1. All feasible and reasonable measures will be taken to reduce impacts and losses to the stream, or to avoid impacts where avoidance is required by these regulations; ~~and~~

2. The restored, created or enhanced stream area or buffer will be available and persistent as the stream or buffer area it replaces; and

3. No overall net loss will occur in stream functions and values.

C. **Compensating for Lost or Impacted Functions.** Mitigation of alterations to fish and wildlife habitat shall achieve equivalent or greater biologic and hydrologic functions and shall include mitigation for adverse impacts upstream or downstream of the development proposal site on a per function basis. Mitigation shall be located on-site except when demonstrated that a higher level of ecological functioning would result from an off-site location. A mitigation plan may include the following:

1. Native vegetation planting plan;

2. Retention, enhancement or restoration plan of specific habitat features;

3. Plans for control of nonnative invasive plant or wildlife species; and

4. Stipulations for use of innovative, sustainable building practices.

D. **Preference of Mitigation Actions.** Methods to achieve compensation for fish and wildlife habitat functions shall be approached in the following order of preference:

1. **Protection.** Mitigation measure that increase the protection of the identified habitat conservation areas may include but are not limited to:

   a. Increased or enhanced buffers;

   b. Setbacks for permanent and temporary structures;

   c. Reduced project scope;

   d. Limitations on construction hours;

   e. Limitations on hours of operation; and/or

   f. Relocation of access;

2. **Restoration.** Restoration of degraded habitat.

3. **Creation.** Creation (establishment) of wildlife habitat on disturbed upland sites such as those with vegetative cover consisting primarily of nonnative species. This should be attempted only when the site conditions are conducive to the habitat type that is anticipated in the design.

4. **Enhancement.** Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions lost. Enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.

5. **Preservation.** Preservation of high quality, at-risk fish and wildlife habitat as compensation is generally acceptable when done in combination with restoration, creation, or enhancement; provided, that a minimum of 1:1 acreage replacement is provided by reestablishment or creation. Preservation of high quality, at-risk fish and wildlife habitat may be considered as the sole means of compensation for habitat impacts when the following criteria are met:

a. Habitat impacts will not have a significant adverse impact on habitat for listed fish, or other ESA listed species;

b. There is no net loss of habitat functions within the watershed or basin;

c. The impact area is small (generally less than one-half acre) and/or impacts are occurring to a low functioning systems; and

d. All preservation sites shall include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

~~C~~E. **Location and Timing of Stream Mitigation.**

1. Mitigation shall be provided on-site, unless on-site mitigation is not scientifically feasible due to the physical features of the property. The burden of proof shall be on the applicant to demonstrate that mitigation cannot be provided on-site.

2. When mitigation cannot be provided on-site, mitigation shall be provided in the immediate vicinity of the permitted activity on property owned or controlled by the applicant such as an easement, provided such mitigation is beneficial to the critical area and associated resources. It is the responsibility of the applicant to obtain title to off-site mitigation areas. Mitigation on City-owned property, or similar publically owned property for which title is not available, through a City mitigation program may be considered if programmatic mitigation areas have been identified.

3. In-kind mitigation shall be provided except when the applicant demonstrates and the City concurs that greater functional and habitat value can be achieved through out-of-kind mitigation.

4. Only when it is determined by the City that subsections (B)(1), (2), and (3) of this section are inappropriate and impractical shall off-site, out-of-kind mitigation be considered.

5. When stream mitigation is permitted by these regulations on-site or off-site, the mitigation project shall occur near an adequate water supply (~~river,~~ stream, groundwater) with a hydrologic connection to the mitigation area to ensure successful development or restoration.

6. Any agreed upon mitigation proposal shall be completed prior to project construction, unless a phased schedule, that assures completion concurrent with project construction, has been approved by the City.

7. Restored or created streams, where permitted by these regulations, shall be an equivalent or higher stream value or function than the altered stream.

~~A. Relevant performance standards for other critical areas (such as wetlands and streams) that may be located within the fish and wildlife habitat conservation area, as determined by the City, shall be incorporated into mitigation plans.~~

~~B~~F. **Performance Standards.** The following ~~additional~~ mitigation measures shall be reflected in fish and wildlife habitat conservation area mitigation planning:

1. The maintenance and protection of habitat values shall be considered a priority in site planning and design~~.~~;

2. Buildings and structures shall be located in a manner that preserves and minimizes adverse impacts to important habitat areas. This may include clustering buildings and locating fences outside of habitat areas~~.~~;

3. Retained habitat shall be integrated into open space and landscaping~~.~~;

4. Where possible, habitat and vegetated open space shall be consolidated in contiguous blocks~~.~~;

5. Habitat shall be located contiguous to other habitat areas, open space or landscaped areas both on- and off-site to contribute to a continuous system or corridor that provides connections to adjacent habitat areas~~.~~;

6. When planting is required, the following standards shall apply:

   a. Native species, indigenous to the region, shall be used in any landscaping of disturbed or undeveloped areas and in any enhancement of habitat or buffers~~.~~;

   b. Plant selection shall be consistent with the existing or projected site conditions, including slope aspect, moisture, and shading;

   c. Plants should be commercially available or available from local sources;

   d. Plant species high in food and cover value for fish and wildlife shall be used;

   e. Mostly perennial species should be planted;

   f. Committing significant areas of the site to species that have questionable potential for successful establishment shall be avoided;

   g. Plant selection, densities, and placement of plants must be determined by a qualified professional and shown on the design plans;

   h. Stockpiling soil and construction materials should be confined to upland areas and contract specifications should limit stockpiling of earthen materials to durations in accordance with City clearing and grading standards, unless otherwise approved by the City;

   i. Planting instructions shall be submitted which describe placement, diversity, and spacing of seeds, tubers, bulbs, rhizomes, sprigs, plugs, and transplanted stock;

   j. Controlled release fertilizer shall be applied (if required) at the time of planting and afterward only as plant conditions warrant as determined during the monitoring process; and

   k. An irrigation system shall be installed, if necessary, for the initial establishment period;

7. The heterogeneity and structural diversity of vegetation shall be emphasized in landscaping~~.~~; and

8. Significant trees~~, preferably in groups,~~ shall be preserved~~, consistent with the requirements of Chapter 20.50 SMC, Subchapter 5, Tree Conservation, Land Clearing and Site Grading, and with the objectives found in these standards~~.

9. All construction specifications and methods shall be approved by a qualified professional and the City.

10. Construction management shall be provided by a qualified professional. Ongoing work on-site shall be inspected by the City. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 4(E), 2000).

H. **Mitigation Plan.** Mitigation plans shall be submitted as part of the required critical area report consistent with the requirements of SMC 20.80.080, 20.80.082, and 20.80.290 and this section. When revegetation is required as part of the mitigation, then the standards of SMC 20.80.350(H) shall be applied, excluding those standards that are wetland specific.

I. **Monitoring Program and Contingency Plan.** A monitoring program shall be implemented by the applicant to determine the success of the mitigation project and any necessary corrective actions. This program shall determine if the original goals and objectives are being met. The monitoring program will be established consistent with the guidelines contained in SMC 20.80.082(D).

Subchapter 4.

Wetlands

20.80.310 WETLANDS – Purpose.

A. Wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, bio-swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands.

B. Wetlands help to maintain water quality; store and convey stormwater and floodwater; recharge ground water; provide important fish and wildlife habitat; and serve as areas for recreation, education, scientific study and aesthetic appreciation.

C. The City's overall goal shall be to achieve no net loss of wetlands. This goal shall be implemented through retention of the function, value and acreage of wetlands within the City. Wetland buffers serve to moderate runoff volume and flow rates; reduce sediment, chemical nutrient and toxic pollutants; provide shading to maintain desirable water temperatures; provide habitat for wildlife; protect wetland resources from harmful intrusion; and generally preserve the ecological integrity of the wetland area.

D. The primary purpose of the wetland regulations is to avoid detrimental wetland impacts and achieve a goal of no net loss of wetland function, value and acreage; and where possible enhance and restore wetlands. (Ord. 695 § 1 (Exh. A), 2014; Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 5(A), 2000).

20.80.320 WETLANDS - Designation~~, delineation~~ and ~~classification~~ rating.

A. ~~The identification of wetlands and the delineation of their boundaries shall be done in accordance with the Federal Wetland Delineation Manual and applicable regional supplements approved by the Washington State Department of Ecology per WAC 173-22-035.~~

B. **Designation.** All areas meeting the definition of a wetland and identifi~~ed~~cation criteria as wetlands pursuant to ~~subsection A~~ SMC 20.80.322 of this section, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter.

~~C. Wetlands, as defined by this subchapter, shall be classified according to the following criteria:~~

~~1. "Type I wetlands" are those wetlands which meet any of the following criteria:~~

~~a. The presence of species proposed or listed by the Federal government or State of Washington as endangered, threatened, critical or priority, or the presence of critical or outstanding actual or potential habitat for those species; or~~

~~b. Wetlands having 40 percent to 60 percent open water in dispersed patches with two or more wetland subclasses of vegetation; or~~

~~c. High quality examples of a native wetland listed in the terrestrial and/or aquatic ecosystem elements of the Washington Natural Heritage Plan that are presently identified as such or are determined to be of heritage quality by the Department of Natural Resources; or~~

~~d. The presence of plant associations of infrequent occurrence. These include, but are not limited to, plant associations found in bogs and in wetlands with a coniferous forested wetland class or subclass~~

~~occurring on organic soils.~~

~~2. "Type II wetlands" are those wetlands which are not Type I wetlands and meet any of the following criteria:~~

~~a. Wetlands greater than one acre (43,560 sq. ft.) in size;~~

~~b. Wetlands equal to or less than one acre (43,560 sq. ft.) but greater than one-half acre (21,780 sq.ft.) in size and have three or more wetland classes; or~~

~~c. Wetlands equal to or less than one acre (43,560 sq. ft.) but greater than one-half acre (21,780 sq.ft.) in size, and have a forested wetland class or subclasses.~~

~~3. "Type III wetlands" are those wetlands that are equal to or less than one acre in size and that have one or two wetland classes and are not rated as Type IV wetlands, or wetlands less than one-half acre in size having either three wetlands classes or a forested wetland class or subclass.~~

~~4. "Type IV wetlands" are those wetlands that are equal to or less than 2,500 square feet, hydrologically isolated and have only one, unforested, wetland class. (Ord. 695 § 1 (Exh. A), 2014; Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 5(B), 2000).~~

B. **Rating.** All ~~W~~wetlands shall be rated by a qualified professional according to the current Washington Department of Ecology wetland rating system, as set forth in the Washington State Wetland Rating System for Western Washington 2014 (Ecology Publication No. ~~0~~14-06-029, or as revised~~, and Wetlands Guidance for Small Cities Western approved by Ecology), which contain the definitions and methods for determining whether the criteria below are met~~. Wetland rating categories shall be applied as the wetland exists on the date of adoption of the rating system by the City, as the wetland naturally changes thereafter, or as the wetland changes in accordance with permitted activities.

1. **Category I.** Category I wetlands are those that represent unique or rare wetland types, are more sensitive to disturbance than most wetlands, are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime, or provide a high level of functions. The following types of wetlands are Category I:

a. Relatively undisturbed estuarine wetlands larger than one acre;

b. Wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR~~as high quality wetlands~~;

c. Bogs;

d. Mature and old-growth forested wetlands larger than one acre;

e. Wetlands in coastal lagoons; and

f. Wetlands that perform many functions well (scoring ~~70~~ 23 points or more based on functions).

2. **Category II.** Category II wetlands are those that are difficult, though not impossible to replace and provide high levels of some functions. The following types of wetlands are Category II:

a. Estuarine wetlands smaller than one acre, or disturbed estuarine wetlands larger than one acre;

b. Interdunal wetlands larger than one acre or those found in a mosaic of wetlands; and

c. ~~Disturbed coastal lagoons; and~~

~~d.~~ Wetlands with a moderately high level of functions (scoring between ~~51~~ 20 and ~~69~~ 22 points).

3. **Category III.** Category III wetlands are those with a moderate level of functions, generally have been disturbed in some ways, can often be adequately replaced with a well-planned mitigation project, and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands. The following types of wetlands are Category III:

a. Wetlands with a moderate level of functions (scoring between ~~30~~ 16 and ~~50~~ 19 points); or

b. Interdunal wetlands between 0.1 and one acre.

4. **Category IV.** Category IV wetlands are those with the lowest levels of functions (scoring ~~fewer than 30~~ below 16 points) and are often heavily disturbed. These are wetlands that we should be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and ~~should~~ also need to be protected ~~to some degree~~.

C. **Illegal Modifications.** Wetland rating categories shall not change due to illegal modifications or alterations ~~made by the applicant or with the applicant's knowledge~~.

D. At the time of adoption of the updated critical areas regulations, Chapter 20.80, Critical Areas, in November 2015, there were no identified Category I wetlands identified within the City of Shoreline. If this category of wetland is subsequently identified any applicable standards may be added or modified by the Director based on Washington State guidance on protection of the identified type of resource where the adopted regulations do not address the specified type of wetland.

20.80.322 WETLANDS – Mapping and delineation.

A. **Mapping.** The approximate location and extent of wetlands are shown in the following maps and inventories:

1. *City of Shoreline, Basin Characterization Reports and Stream and Wetland Inventory and Assessment, Tetra Tech (May 2004);*
2. City of Shoreline stormwater basin plans as completed and updated;
3. Wetland data layer maintained in the City of Shoreline geographic information system (GIS);
4. Soils maps produced by the US Department of Agriculture, National Resources Conservation Service; and
5. the *National Wetlands Inventory*, produced by the US Fish & Wildlife Service.

B. **Reference Only.** The inventories and cited resources are to be used as a guide for the City of Shoreline, project applicants, and/or property owners, and may be continuously updated as new wetlands are identified or critical area reports are submitted for known wetlands. They are a reference and do not provide a final critical area designation.

C. Identification and Delineation. Identification of wetlands and delineation of their boundaries pursuant to this chapter shall be done in accordance with the approved Federal wetland delineation manual and applicable regional supplements per WAC 173-22-035. The exact location of a wetland's boundary shall be determined through the performance of a field investigation by a qualified professional. Wetland delineations are valid for five years; after such date the ~~City~~ Director shall determine whether a revision or additional assessment is necessary.

20.80.324 WETLANDS – Development standards.

A. Activities and uses shall be prohibited in wetlands and wetland buffers, except as provided for in this chapter.

B. **Activities Allowed in Wetlands.** The activities listed below are allowed in wetlands. Exemptions are listed in, the provisions established in SMC 20.80.030 and additional allowed activities in 20.80.040, but do not apply within the shoreline jurisdiction. These activities do not require submission of a critical area report, except where such activities result in a loss of the functions and values of a wetland or wetland buffer. These activities include:

1. Conservation or preservation of soil, water, vegetation, fish, shellfish, and/or other wildlife that does not entail changing the structure or functions of the existing wetland.

2. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.

3. Drilling for utilities/utility corridors under a wetland, with entrance/exit portals located completely outside of the wetland buffer; provided, that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column will be disturbed.

4. Enhancement of a wetland through the select removal of nonnative invasive plant species. Removal of invasive plant species shall be restricted to hand labor and hand-held equipment ~~removal~~ unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. Not more than 500 square feet of area may be cleared, as calculated cumulatively over one (1) year, on private property without a permit. All removed plant material shall be taken away from the site and disposed of appropriately. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds or the King County Noxious Weed List must be handled and disposed of according to a noxious weed control plan appropriate to that species. Revegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

5. Permitted alteration to a legally constructed structure existing within a wetland or wetland buffer that does not increase the footprint of the development or hardscape or increase the impact to a wetland or wetland buffer.

C. **Category I wetlands.** Development activities and uses that result in alteration of Category I wetlands and their associated buffers shall be prohibited subject to the reasonable use provisions and special use provision of SMC 20.30.333 and 20.30.336, unless otherwise allowed by the exemptions or allowed activities provisions of this chapter, or subject to the provisions of the Shoreline Master Program, SMC Title 20, Division II, where the proposed development activity is located within the shoreline jurisdiction.

D. **Category II and III wetlands.** Development activities and uses that result in alteration of Category II and III wetlands is prohibited, unless the applicant can demonstrate that:

1. The basic project proposed cannot reasonably be accomplished on another site or sites in the general region while still successfully avoiding or resulting in less adverse impact on a wetland;

2. All on-site alternative designs that would avoid or result in less adverse impact on a wetland or its buffer, such as a reduction to the size, scope, configuration, or density of the project are not feasible; and

3. Full compensation for the loss of acreage and functions of wetland and buffers due to unavoidable

impacts shall be provided in compliance with the mitigation performance standards and requirements of this chapter.

E. **Category IV wetlands.** Development activities and uses that result in unavoidable impacts may be permitted in Category IV wetlands and associated buffers in accordance with an approved critical area(s) report and compensatory mitigation plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives. Full compensation for the loss of acreage and functions of wetland and buffers shall be provided in compliance with the mitigation performance standards and requirements of these regulations.

F. **Small, hydrologically isolated Category IV wetlands.** The Director may allow small, hydrologically isolated Category IV wetlands to be exempt from the avoidance sequencing provisions of SMC 20.80.055 and SMC 20.80.324(D) and allow alteration of such wetlands provided that a submitted critical area report and mitigation plan provides evidence that all of the following conditions are met:

1. The wetland is less than one thousand (1,000) square feet in area;

2. The wetland is a low quality Category IV wetland with a habitat score of less than 3 points in the adopted rating system;

3. The wetland does not contain habitat identified as essential for local populations of priority species identified by the Washington Department of Fish and Wildlife or species of local importance which are regulated as fish and wildlife habitat conservation areas in Chapter 20.80, Subchapter 3;

4. The wetland is not associated with riparian areas or buffers;

5. The wetland is not part of a wetland mosaic; and

5. A mitigation plan to replace lost wetland functions and values is developed, approved, and implemented consistent with SMC 20.80.350.

G. **Subdivisions.** The subdivision and/or short subdivision of land in wetlands and associated buffers are subject to the following:

1. Land that is located wholly within a wetland or its buffer may not be subdivided; and

2. Land that is located partially within a wetland or its buffer may be subdivided; provided, that an accessible and contiguous portion of each new lot is:

a. Located outside of the wetland and its buffer; and

b. Meets the minimum lot size requirements of SMC 20.50.020~~(1)~~.

20.80.330 WETLANDS - Required buffer areas.

A. ~~Required wetland buffer widths shall reflect the sensitivity of the area and resource or the risks associated with development and, in those circumstances permitted by these regulations, the type and intensity of human activity and site design proposed to be conducted on or near the critical area. Wetland buffers shall be measured from the wetland's edge as delineated in accordance with the Federal Wetland Delineation Manual and applicable regional supplements approved by the Washington State Department of Ecology per WAC 173-22-035.~~ **Buffer Requirements.** The standard buffer widths in Table ~~20.230.031~~ 20.30.330(A)(1) have been established in accordance with the best available science. They are based on the category of

wetland and the habitat score as determined by a qualified wetland professional using the Washington State Wetland Rating System for Western Washington.

1. The use of the standard buffer widths requires the implementation of the measures in Table ~~20.230.032~~ 20.80.330(A)(2), where applicable, to minimize the impacts of the adjacent land uses.

2. If an applicant chooses not to apply the mitigation measures in Table ~~20.230.032~~ 20.80.330(A)(2), then a 33 percent increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 100-foot buffer without them.

3. The standard buffer widths assume that the buffer is ~~vegetated with a~~ relatively intact native plant community ~~appropriate for the ecoregion~~ in the buffer zone adequate to protect the wetland functions and values at the time of the proposed activity. If the existing buffer is ~~unvegetated~~ bare ground, sparsely vegetated, or vegetated with nonnative or invasive species that do not perform needed functions, then the applicant must either develop and implement a wetland buffer restoration or enhancement plan to maintain the standard width to create the appropriate plant community or the buffer ~~should~~ must be widened to ensure that adequate functions of the buffer are provided.

~~4. Additional buffer widths are added to the standard buffer widths. For example, a Category I wetland scoring 9 points for habitat function would require a buffer of 225 feet (75 + 150).~~

~~B. Wetland buffers shall be established as follows:~~

Table 20.80.330(A)(1) Wetland Buffer Requirements

Wetland Category	**Buffer Width According to Habitat Score**			
	Habitat Score of 3-4	**Habitat Score of 5**	**Habitat Score of 6-7**	**Habitat Score of 8-9**
Category I: Based on total score or Forested	75 ft	105 ft	165 ft	225 ft
Category I: Estuarine	150 ft (no change based on habitat scores)			
Category II: Based on total score	75 ft	105 ft	165 ft	225 ft
Category III (all)	60 ft	105 ft	165 ft	225 ft
Category IV (all)	40 ft (no change based on habitat scores)			

Table ~~20.230.032~~ 20.80.330(A)(2) Required measures to minimize impacts to wetlands (Measures are required, where applicable to a specific proposal)

Disturbance	**Activities and Uses that Cause Disturbances**	**Required Measures to Minimize Impacts**
Lights	• Parking lots • Warehouses • Manufacturing • Residential	• Direct lights away from wetland.

Disturbance	**Activities and Uses that Cause Disturbances**	**Required Measures to Minimize Impacts**
Noise	• Manufacturing • Residential	• Locate activity that generates noise away from wetland. • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source. • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10 ft heavily vegetated buffer strip immediately adjacent to the outer wetland buffer.
Toxic runoff*	• Parking lots • Roads • Manufacturing • Residential areas • Application of agricultural pesticides • Landscaping	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered. • Establish covenants limiting use of pesticides and fertilizers within 150 ft of wetland. • Apply integrated pest management.
Stormwater runoff	• Parking lots • Roads • Manufacturing • Residential areas • Commercial • Landscaping	• Retrofit stormwater detention and treatment for roads and existing adjacent development. • Prevent channelized flow from lawns that directly enters the buffer. • Use Low Intensity Development techniques (per PSAT publication on LID techniques).
Change in water regime	• Impermeable surfaces • Lawns • Tilling	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns.
Pets and human disturbance	• Residential areas	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion. • Place wetland and its buffer in a separate tract or protect with a conservation easement.
Dust	• Tilled fields	• Use best management practices to control dust.
Disruption of corridors or connections		• Maintain connections to off-site areas that are undisturbed. • Restore corridors.
* These examples are not necessarily adequate for minimizing toxic runoff if threatened or endangered species are present at the site.		

~~C. The standard buffer width shall be established; provided, that the buffer may be reduced to the minimum buffer listed above if the applicant can demonstrate that a smaller area is adequate to protect the wetland functions and one or both of the following:~~

~~1. The proposed use and activities are considered low impact, and may include the following:~~

~~a. A site layout with no parking, outdoor storage, or use of machinery;~~

~~b. The proposed use does not involve usage or storage of chemicals; and~~

~~c. Passive areas are located adjacent to the subject buffer; and~~

~~d. Both the wetland and its buffer are incorporated into the site design in a manner which eliminates the risk of adverse impact on the subject critical area.~~

~~2. Wetland and buffer enhancement is implemented that will result in equal or greater wetland functions. This includes but is not limited to the following:~~

~~a. Enhancement of fish and wildlife habitat by incorporating structures that are likely to be used by wildlife, including wood duck houses, bat boxes, nesting platforms, snags, rootwads/stumps, birdhouses, and heron nesting areas.~~

~~b. Planting native vegetation that would increase value for fish and wildlife habitat, improve water quality, or provide aesthetic/recreational value.~~

~~D. When a wetland has salmonid fish use consistent with SMC 20.80.470, the corresponding wetland or stream buffer, whichever is greater, shall be established.~~

~~E. The City may extend the width of the buffer on the basis of site-specific analysis when necessary to achieve the goals of this subchapter.~~

5. **Increased Wetland Buffer Area Width.** Buffer widths shall be increased on a case-by-case basis as determined by the ~~Administrator~~ Director when a larger buffer is necessary to protect wetland functions and values. This determination shall be supported by ~~appropriate documentation~~ a critical area report showing that it is reasonably related to protection of the functions and values of the wetland. The ~~documentation~~ critical area report must include, but not be limited to, the following criteria:

a. The wetland is used by a plant or animal species listed by the Federal government or the State as endangered, threatened, candidate, sensitive, monitored or documented priority species or habitats, or essential or outstanding habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees; or

b. The adjacent land has slopes greater than 15 percent or is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or

c. The adjacent land has minimal vegetative cover ~~or slopes greater than 30 percent~~. In lieu of increasing the buffer width where exiting buffer vegetation is inadequate to protect the wetland functions and values, development and implementation of a wetland buffer restoration/enhancement plan in accordance with SMC 20.80.350 may be substituted.

~~F. Wetland buffer widths may be modified by averaging buffer widths as set forth herein. Buffer width averaging shall be allowed only where the applicant demonstrates to the City:~~

~~1. The ecological structure and function of the buffer after averaging is equivalent to or greater than the structure and function before averaging;~~

~~2. That the total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging;~~

~~3. Buffer averaging will not result in a buffer width being reduced by more than 25 percent of the required buffer as set forth in Table 20.80.330B and in no case may the buffer be less than the stated minimum width.~~

~~4. A habitat survey shall be conducted within the area of concern in order to identify and prioritize highly functional fish and wildlife habitat within the study area.~~

~~The City may require buffer averaging to be designed to protect areas of greater sensitivity and function based on the recommendations of a wetland report prepared by a qualified professional.~~

6. Buffer averaging to improve wetland protection may be permitted when all of the following conditions are met:

a. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a “dual-rated” wetland with a Category I area adjacent to a lower rated area;

b. The buffer is increased adjacent to the higher functioning area of habitat or more sensitive portion of the wetland and decreased adjacent to the lower functioning or less sensitive portion as demonstrated by a critical areas report from a qualified wetland professional;

c. The total area of the buffer after averaging is equal to the area required without averaging; and

d. The buffer at its narrowest point is never less than either three-fourths of the required width or 75 feet for Category I and II, 50 feet for Category III, and 25 feet for Category IV, whichever is greater.

7. Averaging through a Critical Area Reasonable Use Permit consistent with SMC 20.30.333 or Critical Area Special Use Permit consistent with SMC 20.30.336 or a ~~s~~Shoreline ~~v~~Variance consistent with 20.220.040 may be permitted when all of the following are met:

a. There are no feasible alternatives to the site design that could be accomplished without buffer averaging;

b. The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional;

c. The total buffer area after averaging is equal to the area required without averaging; and

d. The buffer at its narrowest point is never less than either three-fourths of the required width or 75 feet for Category I and II, 50 feet for Category III and 25 feet for Category IV, whichever is greater.

B. To facilitate long-range planning using a landscape approach, the ~~Administrator~~ Director may identify and preassess wetlands using the rating system and establish appropriate wetland buffer widths for such wetlands. The ~~Administrator~~ Director will prepare maps of wetlands that have been preassessed in this manner.

C. **Measurement of Wetland Buffers.** All buffers shall be measured perpendicular from the wetland boundary as surveyed in the field. The buffer for a wetland created, restored, or enhanced as compensation for approved wetland alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland. ~~Only fully vegetated buffers will be considered. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers or included in buffer area calculations.~~

D. **Buffers on Mitigation Sites.** All mitigation sites shall have buffers consistent with the buffer requirements of this chapter. Buffers shall be based on the expected or target category of the proposed wetland mitigation site.

E. **Buffer Maintenance.** Except as otherwise specified or allowed in accordance with this chapter, wetland buffers shall be retained in an undisturbed or enhanced condition. In the case of compensatory mitigation sites, removal of invasive nonnative weeds is required for the duration of the mitigation bond (~~subsection (C)(6)(h)(ii)(A)(8) of this section~~ SMC 20.80.350(H)(2)(a)(viii)).

F. **Impacts to Buffers.** Requirements for the compensation for impacts to buffers are outlined in ~~subsection (C)(6)~~ SMC 20.80.350 of this section.

G. **Overlapping Critical Area Buffers.** If buffers for two contiguous critical areas overlap (such as buffers for a stream and a wetland), the wider buffer applies.

~~G. Low impact uses and activities which are consistent with the purpose and function of the wetland buffer and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the wetland. Examples of uses and activities which may be permitted in appropriate cases include trails constructed in a manner to reduce impervious surfaces, viewing platforms, and utility easements; provided, that any impacts to the buffer resulting from such permitted activities are fully mitigated. Uses permitted within the buffer shall be located as far from the wetland as possible.~~

H. **Allowed Wetland Buffer Uses.** The following uses may be allowed within a wetland buffer in accordance with the review procedures of this chapter, provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

1. **Conservation and Restoration Activities.** Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.

2. **Passive Recreation.** Passive recreation facilities designed and in accordance with an approved critical area report, including:

   a. Walkways and trails; provided, that those pathways are limited to minor crossings having no adverse impact on water quality. They should be generally parallel to the perimeter of the wetland, located only in the outer twenty-five percent (25%) ~~25 percent~~ of the wetland buffer area, and located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five (5) feet in width for pedestrian use only. Raised boardwalks utilizing nontreated pilings may be acceptable; and/or

   b. Wildlife viewing structures.

3. Educational and scientific research activities.

4. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way; provided, that the maintenance or repair does not increase the footprint or use of the facility or right-of-way.

5. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops, and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.

6. Drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside of the wetland buffer boundary; provided, that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column is disturbed.

7. Enhancement of a wetland through the select removal of nonnative invasive plant species. Removal of invasive plant species shall be restricted to hand labor and hand-held equipment ~~removal~~ unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. Not more than1,500 square feet of area may be cleared, as calculated cumulatively over one (1) year, on private property without a permit. All removed plant material shall be taken away from the site and disposed of appropriately. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds or the King County Noxious Weed List must be handled and disposed of according to a noxious weed control plan appropriate to that species. Revegetation with appropriate native

species at natural densities is allowed in conjunction with removal of invasive plant species.

~~H. Stormwater management facilities, such as bio-swales, may not be located within the minimum buffer area as set forth in Table 20.80.330B unless it is determined that the location of the facility will enhance the buffer area, and protect the wetland.~~

8. **Stormwater Management Facilities.** Stormwater management facilities are limited to stormwater dispersion outfalls, ~~and~~ bioswales, and other low impact facilities consistent with the adopted stormwater manual. They may be allowed within the outer 25 percent of the buffer of Category III or IV wetlands only; provided, that:

a. No other location is feasible;

b. The location of such facilities will not degrade the functions or values of the wetland; and

c. Stormwater management facilities are not allowed in buffers of Category I or II wetlands.

9. **Nonconforming Uses.** Repair and maintenance of nonconforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity.

10. **Development Proposals within Physically Separated and Functionally Isolated Wetland Buffers.** Consistent with the definition of "buffers" (SMC 20.20.012), areas that are functionally isolated and physically separated from wetland due to existing, legally established roadways, paved trails eight (8) feet or more in width, or other legally established structures or paved areas eight (8) feet or more in width that occurs between the area in question and the wetland shall be considered physically isolated and functionally separated wetland buffer. Once determined by the Director based on a submitted critical area report to be a physically separated and functionally isolated wetland buffer, development proposals shall be allowed in these areas.

~~I. A regulated wetland and its associated buffer shall either be placed in a separate tract on which development is prohibited, protected by execution of an easement, dedicated to a conservation organization or land trust, or similarly preserved through a permanent protective mechanism acceptable to the City. The location and limitations associated with the wetland and its buffer shall be shown on the face of the deed or plat applicable to the property and shall be recorded with the King County Department of Records. (Ord. 695 § 1 (Exh. A), 2014; Ord. 469 § 1, 2007; Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 5(C), 2000).~~

I. **Signs and Fencing of Wetlands and Buffers.**

1. **Temporary Markers.** The outer perimeter of the wetland buffer and the clearing limits identified by an approved permit or authorization shall be marked in the field with temporary "clearing limits" fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the ~~Administrator~~ Director prior to the commencement of permitted activities during the preconstruction meeting required under SMC 20.50.330(E). This temporary marking and fencing shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

2. **Permanent Signs.** As a condition of any permit or authorization issued pursuant to this chapter, the ~~Administrator~~ Director may require the applicant to install permanent signs along the boundary of a wetland or buffer, when recommended in a critical area report or otherwise required by the provisions of this chapter.

a. Permanent signs shall be made of an enamel-coated metal face and attached to a metal post or another nontreated material of equal durability. Signs must be posted at an interval of one per lot or every fifty (50) feet, whichever is less, and must be maintained by the property owner in perpetuity. The signs shall be worded ~~as follows~~ consistent with the text specified in SMC 20.80.110 or with alternative language approved by the ~~Administrator:~~ Director.

~~Protected Wetland Area Do Not Disturb~~

~~Contact the City of Shoreline Regarding Uses, Restrictions, and Opportunities for Stewardship~~

b. The provisions of subsection ~~(C)(4)(i)(ii)(A)~~ (a) of this section may be modified as necessary to assure protection of sensitive features.

3. **Fencing.** Fencing installed as part of a proposed activity or as required in this subsection shall be designed so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat. Permanent fencing shall be required at the outer edge of the critical area buffer under the following circumstances, provided that the Director may waive this requirement:

a. As part of any development proposal for subdivisions, short plats, multifamily, mixed use, and commercial development where the Director determines that such fencing is necessary to protect the functions of the critical area, provided that breaks in permanent fencing may be allowed for access to permitted buffer uses (SMC 20.80.330(H));

b. As part of development proposals for parks where the adjacent proposed use is active recreation and the Director determines that such fencing is necessary to protect the functions of the critical area;

c. When buffer averaging is part of a development proposal;

d. When buffer reductions are part of a development proposal; or

f. At the Director's discretion to protect the values and functions of a critical area as demonstrated in a critical area report. If found to be necessary, the Director shall condition any permit or authorization issued pursuant to this chapter to require the applicant to install a permanent fence at the edge of the habitat conservation area or buffer, when fencing will prevent future impacts to the habitat conservation area.

f. The applicant shall be required to install a permanent fence around the wetland buffer when domestic grazing animals, only as allowed under SMC 20.40.240, are present or may be introduced on site.

~~**20.80.340 Alteration.**~~

~~A. **Type I Wetlands.** Alterations of Type I wetlands shall be prohibited subject to the reasonable use provisions and special use permit provision of this title.~~

~~B. **Type II, III and IV Wetlands.**~~

~~1. Any proposed alteration and mitigation shall comply with the mitigation performance standards and requirements of these regulations; and~~

~~2. No net loss of wetland function and value may occur; and~~

~~3. Where enhancement or replacement is proposed, ratios shall comply with the requirements of this subchapter. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 5(D), 2000).~~

20.80.340 WETLANDS - Critical area report requirements.

A. **Report Required.** If the ~~Administrator~~ Director determines that the site of a proposed development includes, is likely to include, or is adjacent to a wetland, a wetland critical area report~~, prepared by a qualified professional,~~ shall be required. ~~The expense of preparing the wetland report shall be borne by the applicant.~~ Critical area report requirements for wetland areas are generally met through submission to the Director of one or more wetland critical area reports. In addition to the general critical area report requirements of SMC 20.80.080, critical area reports for wetlands must meet the requirements of this section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

B. **Preparation by a Qualified Professional.** Critical area reports for wetlands shall be prepared and signed by a qualified professional who is a certified wetland scientist or a non-certified wetland scientist with the minimum required experience, per SMC 20.20.042, in the field of wetland science and with experience preparing wetland delineation, impact assessments, and mitigation plans.

C. **Third Party Review Required.** Critical areas studies and reports on wetland areas shall be subject to third party review consistent with SMC 20.80.080(C) and in any of the additional following circumstances:

1. Compensatory mitigation is required for impacts to Category I, II, or III wetlands and or buffers; or

2. Compensatory mitigation is required for impacts to Category IV wetlands.

D. **Minimum ~~Standards~~ Report Contents for Wetland ~~Reports~~.** The written critical area report(s) and ~~the~~ accompanying plan sheet(s) shall contain the following information~~,~~ at a minimum:

1. The minimum report contents required per SMC 20.80.080(E);

~~1. The name and contact information of the applicant; the name, qualifications, and contact information for the primary author(s) of the wetland critical area report; a description of the proposal; identification of all the local, State, and/or Federal wetland related permit(s) required for the project; and a vicinity map for the project.~~

~~2. A statement specifying the accuracy of the report and all assumptions made and relied upon.~~

~~3~~2. Documentation of any fieldwork performed on the site, including field data sheets for delineations, rating system forms, baseline hydrologic data, site photos, etc.~~,~~;

~~4~~3. A description of the methodologies used to conduct the wetland delineations, rating ~~system forms~~, or impact analyses including references~~.~~;

~~D~~4. **Site Plans.** A copy of the site plan sheet(s) for the project must be included with the written report and must include, at a minimum:

~~1~~a. Maps (to scale) depicting delineated and surveyed wetland(s) and required buffers on site, including buffers for off-site critical areas that extend onto the project site; the development proposal; other critical areas; clearing and grading ~~and clearing~~ limits; areas of proposed impacts to wetlands and/or buffers (include square footage estimates); and

~~2~~b. A depiction of the proposed stormwater management facilities and outlets (to scale) for the development, including estimated areas of intrusion into the buffers of any critical areas. The written report shall contain a discussion of the potential impacts to the wetland(s) associated with anticipated hydroperiod alterations from the project.

~~5. Identification and characterization of all critical areas, wetlands, water bodies, shorelines, floodplains, and buffers on or adjacent to the proposed project area. For areas off site of the project site, estimate conditions within 300 feet of the project boundaries using the best available information.~~

~~6~~5. For each wetland identified on site and within 300 feet of the project site provide: the wetland rating, including a description of and score for each function, per wetland ratings (~~subsection (C)(2)(b) of this section~~ SMC 20.80.320(B)); required buffers (SMC 20.80.330); hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acreages for on-site portion and entire wetland area including off-site portions); Cowardin classification of vegetation communities; habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlet/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.). Provide acreage estimates, classifications, and ratings based on entire wetland complexes, not only the portion present on the proposed project site~~.~~;

~~7~~6. A description of the proposed actions, including an estimation of acreages of impacts to wetlands and buffers based on the field delineation and survey and an analysis of site development alternatives, including a no-development alternative~~.~~;

~~8~~7. An assessment of the probable cumulative impacts to the wetlands and buffers resulting from the proposed development~~.~~;

~~9~~8. A description of reasonable efforts made to apply mitigation sequencing pursuant to SMC 20.80.053(A) Mitigation Sequencing ~~(subsection (C)(6)(a) of this section)~~ to avoid, minimize, and mitigate impacts to critical areas~~.10. A~~ and a discussion of measures, including avoidance, minimization, and compensation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land-use activity~~.~~;

~~11~~9. A conservation strategy for habitat and native vegetation that addresses methods to protect and enhance on-site habitat and wetland functions~~.~~; and

~~C~~10. An evaluation of the functions of the wetland and adjacent buffer. Include reference for the method used and data sheets.

E. **Additional Information.** When appropriate due to the proposed impacts or the project area conditions, the Director may also require the critical area report to include:

1. Where impacts are proposed, mitigation plans consistent with the requirements of SMC 20.80.082 and the wetland mitigation performance standards and requirements of SMC 20.80.350.

2. A request for consultation with the Washington Department of Fish and Wildlife (DFW) , Washington Department of Ecology (Ecology), local Native American Indian Tribes, or other appropriate agency;

3. Copies of the Joint Aquatic Resource Permit Application (JARPA) and related approvals, such as a

Hydraulic Project Approval (HPA) from the DFW, when applicable to the project; and

4. Detailed surface and subsurface hydrologic features both on and adjacent to the site.

20.80.350 WETLANDS – Compensatory ~~M~~mitigation performance standards and requirements.

~~A. **Appropriate Wetland Mitigation Sequence and Actions.** Where impacts cannot be avoided, and the applicant has exhausted feasible design alternatives, the applicant or property owner shall seek to implement other appropriate mitigation actions in compliance with the intent, standards and criteria of this section. In an individual case, these actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal, and/or implementation of the performance standards listed in this subchapter.~~

~~B. Impacts to wetland functions and values shall be mitigated. Mitigation actions shall be implemented in the preferred sequence: Avoidance, minimization, restoration and replacement. Proposals which include less preferred and/or compensatory mitigation shall demonstrate that:~~

~~1. All feasible and reasonable measures will be taken to reduce impacts and losses to the critical area, or to avoid impacts where avoidance is required by these regulations; and~~

~~2. The restored, created or enhanced critical area or buffer will be as available and persistent as the critical area or buffer area it replaces; and~~

~~3. In the case of wetlands and streams, no overall net loss will occur in wetland or stream functions and values.~~

A. **Requirements for Compensatory Mitigation.**

1. Compensatory mitigation for alterations to wetlands shall be used only for impacts that cannot be avoided or minimized and shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1), Ecology Publication No. 06-06-011b, Olympia, WA, March 2006 or as revised.

2. Mitigation ratios shall be consistent with ~~subsection (C)(6)(g) of this section~~ SMC 20.80.350(G).

3. Mitigation requirements may also be determined using the credit/debit tool described in "Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Operational Draft" (Ecology Publication No. 10-06-011, February 2011, or as revised) consistent with ~~subsection (C)(6)(h) of this section~~ SMC 20.80.350(G).

B. **Compensating for Lost or ~~Affected~~ Impacted Functions.** Compensatory mitigation shall address the functions affected by the proposed project, with an intention to achieve functional equivalency or improvement of functions. The goal shall be for the compensatory mitigation to provide similar wetland functions as those lost, except when either:

1. The lost wetland provides minimal functions, and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal Washington State watershed assessment plan or protocol; or

2. Out-of-kind replacement of wetland type or functions will best meet watershed goals formally identified by the City, such as replacement of historically diminished wetland types.

C. **Preference of Mitigation Actions.** Methods to achieve compensation for wetland functions shall be approached in the following order of preference:

1. **Restoration.** Restoration ~~(reestablishment and rehabilitation)~~ of wetlands.

2. **Creation.** Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of nonnative species. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.

3. **Enhancement.** Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions lost. Enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.

4. **Preservation.** Preservation of high quality, at-risk wetlands as compensation is generally acceptable when done in combination with restoration, creation, or enhancement; provided, that a minimum of 1:1 acreage replacement is provided by reestablishment or creation. Preservation of high quality, at-risk wetlands and habitat may be considered as the sole means of compensation for wetland impacts when the following criteria are met:

   a. Wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA listed species;

   b. There is no net loss of habitat functions within the watershed or basin;

   c. Mitigation ratios for preservation as the sole means of mitigation shall generally start at 20:1. Specific ratios should depend upon the significance of the preservation project and the quality of the wetland resources lost; and

   d. The impact area is small (generally less than one-half acre) and/or impacts are occurring to a low functioning system (Category III or IV wetland).

   e. All preservation sites shall include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

~~C. **Location and Timing of Wetland Mitigation.**~~

~~1. Wetland mitigation shall be provided on-site, unless on-site mitigation is not scientifically feasible due to the physical features of the property. The burden of proof shall be on the applicant to demonstrate that mitigation cannot be provided on-site.~~

~~2. When mitigation cannot be provided on-site, mitigation shall be provided in the immediate vicinity of the permitted activity on property owned or controlled by the applicant such as an easement, provided such mitigation is beneficial to the critical area and associated resources. It is the responsibility of the applicant to obtain title to off-site mitigation areas.~~

~~3. In-kind mitigation shall be provided except when the applicant demonstrates and the City concurs that greater functional and habitat value can be achieved through out-of-kind mitigation.~~

~~4. Only when it is determined by the City that subsections (C)(1), (2), and (3) of this section are inappropriate and impractical shall off-site, out-of-kind mitigation be considered.~~

~~5. When wetland mitigation is permitted by these regulations on-site or off-site, the mitigation project shall occur near an adequate water supply (river, stream, ground water) with a hydrologic connection to the proposed wetland mitigation area to ensure successful development or restoration.~~

~~6. Any agreed upon mitigation proposal shall be completed prior to project construction, unless a phased schedule that assures completion concurrent with project construction, has been approved by the City.~~

~~7. Wetland acreage replacement ratios shall be as specified in this section.~~

~~8. When wetland mitigation is permitted by these regulations, native plant materials salvaged from the original wetland area shall be utilized to the maximum extent possible.~~

D. **Type and Location of Compensatory Mitigation.** Unless it is demonstrated that a higher level of ecological functioning would result from an alternative approach, compensatory mitigation for ecological functions shall be either in kind and on site, or in kind and within the same stream reach, sub-basin, or drift cell (if estuarine wetlands are impacted). Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of the following apply:

1. There are no reasonable opportunities on site or within the sub-drainage basin (e.g., on-site options would require elimination of high functioning upland habitat), or opportunities on site or within the sub-drainage basin do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and proposed widths, available water to maintain anticipated hydrogeomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);

2. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and

3. Off-site locations shall be in the same sub-drainage basin unless~~:~~

~~a. W~~watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the City and strongly justify location of mitigation at another site.~~; or~~

4. The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced) that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source(s) and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which would require the construction of berms to hold the water.

~~D. **Wetland Replacement Ratios.**~~

~~1. Where wetland alterations are permitted by the City, the applicant shall restore or create areas of wetlands in order to compensate for wetland losses. Equivalent areas shall be determined according to acreage, function, type, location, timing factors and projected success of restoration or creation.~~

~~2. When creating or enhancing wetlands, the following acreage replacement ratios shall be used:~~

~~Table 20.80.350D~~

~~Wetland Type~~	~~Wetland Creation Replacement Ratio (Area)~~	~~Wetland Enhancement Ratio (Area)~~
~~Type I~~	~~6:1~~	~~16:1~~
~~Type II~~	~~3:1~~	~~12:1~~
~~Type III~~	~~2:1~~	~~8:1~~
~~Type IV~~	~~1.5:1~~	~~6:1~~

~~The Department shall have discretion to increase these standards where mitigation is to occur off-site or in other appropriate circumstances based on the recommendations of a wetlands report that includes best available science and is prepared by a qualified professional.~~

~~3. Enhanced wetlands shall have higher wetland values and functions than the altered wetland. The values and functions transferred shall be of equal or greater quality to assure no net loss of wetland values and functions.~~

~~4. Enhanced and created wetlands shall be appropriately classified and buffered.~~

~~5. An enhanced or created wetland and its associated buffer shall be placed either in a separate tract on which development is prohibited, protected by execution of an easement, dedicated to a conservation organization or land trust, or similarly preserved through a permanent protective mechanism acceptable to the City and shall be recorded with the King County Department of Records.~~

E. Wetland Mitigation Ratios[1].

Table 20.80.350(G). Wetland mitigation ratios apply when impacts to wetlands cannot be avoided or are otherwise allowed consistent with the provisions of this chapter.

Category and Type of Wetland[2]	Creation or Reestablishment	Rehabilitation	Enhancement	Preservation
Category I: Based on total score for functions	4:1	8:1	16:1	20:1
Category I: Mature forested	6:1	12:1	24:1	24:1
Category I: Estuarine	Case-by-case	6:1	Case-by-case	Case-by-case
Category II: Based on total score for functions	3:1	6:1	12:1	20:1
Category III (all)	2:1	4:1	8:1	15:1
Category IV (all)	1.5:1	3:1	6:1	10:1

[1] Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or reestablishment. See Table 1a or 1b, Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance – Version 1 (Ecology Publication No. 06-06-011a, Olympia, WA, March 2006 or as revised).

[2] Category and rating of wetland as determined consistent with SMC 20.80.320(B).

F. **Buffer Mitigation Ratios.** Impacts to buffers shall be mitigated at a 1:1 ratio. Compensatory buffer mitigation shall replace those buffer functions lost from development.

~~E~~G. ~~**Wetlands**~~ **Mitigation Performance Standards.** The performance standards in this section shall be incorporated into mitigation plans submitted to the City for impacts to critical areas. ~~In addition, the City may prepare a technical manual which includes guidelines and requirements for report preparation.~~ The following performance standards shall apply to any mitigations proposed within ~~Type~~ Category I, ~~Type~~ II, ~~Type~~ III and ~~Type~~ IV wetlands and their buffers. Modifications to these performance standards consistent with the guidance in *Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, Olympia, WA, March 2006 or as revised) may be considered for approval by the Director as alternatives to the following standards.*

1. Plants indigenous to the region (not introduced or foreign species) shall be used.

2. Plant selection shall be consistent with the existing or projected hydrologic regime, including base water levels and stormwater event fluctuations.

3. Plants should be commercially available or available from local sources.

4. Plant species high in food and cover value for fish and wildlife shall be used.

5. Mostly perennial species should be planted.

6. Committing significant areas of the site to species that have questionable potential for successful establishment shall be avoided.

7. Plant selection must be approved by a qualified ~~consultant~~ professional.

8. The following standards shall apply to wetland design and construction:

   a. Water depth shall not exceed six and one-half feet (two meters).

   b. The grade or slope that water flows through the wetland shall not exceed six percent.

   c. Slopes within the wetland basin and the buffer zone shall not be steeper than 3:1 (horizontal to vertical).

   d. The wetland (excluding the buffer area) should not contain more than 60 percent open water as measured at the seasonal high water mark.

9. Substrate should consist of a minimum of one foot, in depth, of clean (uncontaminated with chemicals or solid/hazardous wastes) inorganic/organic materials.

10. Planting densities and placement of plants should be determined by a qualified ~~consultant~~ professional and shown on the design plans.

11. The planting plan shall be approved by the City.

12. Stockpiling soil and construction materials should be confined to upland areas and contract specifications should limit stockpiling of earthen materials to durations in accordance with City clearing and grading standards, unless otherwise approved by the City.

13. Planting instructions shall be submitted which describe ~~proper~~ placement, diversity, and spacing of seeds,

tubers, bulbs, rhizomes, sprigs, plugs, and transplanted stock.

14. Controlled release fertilizer shall be applied (if required) at the time of planting and afterward only as plant conditions warrant as ~~(~~determined during the monitoring process~~)~~.

15. An irrigation system shall be installed, if necessary, for the initial establishment period.

16. All construction specifications and methods shall be approved by a qualified ~~consultant~~ professional and the City.

17. Construction management shall be provided by a qualified ~~consultant~~ professional. Ongoing work on-site shall be inspected by the City.

H. **Compensatory Mitigation Plan.** When a project involves wetland and/or buffer impacts, a compensatory mitigation plan as part of the required critical area report. ~~prepared by a qualified professional shall be required.~~ Compensatory wetland mitigation plans must meet the minimum requirements SMC 20.80.082 and demonstrate compliance with SMC 20.80.053. Full guidance can be found in *Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, Olympia, WA, March 2006 or as revised).* The mitigation plan must meet the following additional ~~meeting the following minimum~~ standards:

1. Description of the existing wetland and buffer areas proposed to be impacted. Include acreage (or square footage), water regime, vegetation, soils, landscape position, surrounding land uses, and functions. Also describe impacts in terms of acreage by Cowardin classification, hydrogeomorphic classification, and wetland rating, based on wetland ratings (~~subsection (C)(2)(b) of this section~~ SMC 20.80.320(B));

2. Description of the compensatory mitigation site, including location and rationale for selection. Include an assessment of existing conditions: acreage (or square footage) of wetlands and uplands, water regime, sources of water, vegetation, soils, landscape position, surrounding land uses, and functions. Estimate future conditions in this location if the compensation actions are not undertaken (i.e., how would this site progress through natural succession?);

3. A description of the proposed actions for compensation of wetland and upland areas affected by the project. Include overall goals of the proposed mitigation, including a description of the targeted functions, hydrogeomorphic classification, and categories of wetlands;

4. A description of the proposed mitigation construction activities, construction/installation notes, and timing of activities;

5. A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs (for remaining wetlands and compensatory mitigation wetlands); and

6. Proof of establishment of notice on title for the wetlands and buffers on the project site, including the compensatory mitigation areas.

7. The scaled plan sheets for the compensatory mitigation must contain, at a minimum:

   a. Surveyed edges of the existing wetland and buffers, proposed areas of wetland and/or buffer impacts, location of proposed wetland and/or buffer compensation actions;

b. Existing topography, ground-proofed, at two-foot contour intervals in the zone of the proposed compensation actions if any grading activity is proposed to create the compensation area(s). Also existing cross-sections of on-site wetland areas that are proposed to be impacted, and cross-section(s) (estimated one-foot intervals) for the proposed areas of wetland or buffer compensation;

c. Surface and subsurface hydrologic conditions, including an analysis of existing and proposed hydrologic regimes for enhanced, created, or restored compensatory mitigation areas. Also, illustrations of how data for existing hydrologic conditions were used to determine the estimates of future hydrologic conditions;

d. Conditions expected from the proposed actions on site, including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future water regimes;

e. Required wetland buffers for existing wetlands and proposed compensation areas. Also, identify any zones where buffers are proposed to be reduced or enlarged outside of the standards identified in this chapter;

f. A plant schedule for the compensation area, including all species by proposed community type and water regime, size and type of plant material to be installed, spacing of plants, typical clustering patterns, typical plant installation details and notes, total number of each species by community type, timing of installation; and

g. Performance standards (measurable standards reflective of years post-installation) for upland and wetland communities, monitoring ~~schedule~~ plan, contingency plan, and maintenance schedule, and actions. Standards for success shall be established based on the performance standards identified and the functions and values being mitigated based on the guidance in *Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, Olympia, WA, March 2006 or as revised)*.

~~F. **Approved Wetland Mitigation Projects – Signature.** On completion of construction, any approved mitigation project shall be signed off by the applicant's qualified consultant and approved by the City. Signature of the qualified consultant and approval by the City will indicate that the construction has been completed as planned.~~

~~G. **Monitoring Program and Contingency Plan.**~~

~~1. A monitoring program shall be implemented by the applicant to determine the success of the mitigation project and any necessary corrective actions. This program shall determine if the original goals and objectives are being met.~~

~~2. A contingency plan shall be established for indemnity in the event that the mitigation project is inadequate or fails. A performance and maintenance bond or other acceptable financial guarantee is required to ensure the applicant's compliance with the terms of the mitigation agreement. The amount of the performance and maintenance bond shall equal 125 percent of the cost of the mitigation project in addition to the cost for monitoring for a minimum of five years. The bond may be reduced in proportion to work successfully completed over the period of the bond. The bonding period shall coincide with the monitoring period.~~

~~3. Monitoring programs prepared to comply with this section shall reflect the following guidelines:~~

~~a. Scientific procedures shall be used to establish the success or failure of the project.~~

~~b. For vegetation determinations, permanent sampling points shall be established.~~

~~c. Vegetative success shall, at a minimum, equal 80 percent survival of planted trees and shrubs and 80 percent cover of desirable understory or emergent plant species at the end of the required monitoring period. Additional standards for vegetative success, including (but not limited to) minimum survival standards following the first growing season, may be required after consideration of a report prepared by a qualified consultant.~~

~~d. Monitoring reports on the current status of the mitigation project shall be submitted to the City. The reports are to be prepared by a qualified consultant and reviewed by the City or a consultant retained by the City and should include monitoring information on wildlife, vegetation, water quality, water flow, stormwater storage and conveyance, and existing or potential degradation, as applicable, and shall be produced on the following schedule: at the time of construction; 30 days after planting; early in the growing season of the first year; at the end of the growing season of the first year; twice during the second year; and annually thereafter.~~

~~e. Monitoring programs shall be established for a minimum of five years.~~

~~f. If necessary, failures in the mitigation project shall be corrected.~~

~~g. Dead or undesirable vegetation shall be replaced with appropriate plantings.~~

~~h. Damage caused by erosion, settling, or other geomorphological processes shall be repaired.~~

~~i. The mitigation project shall be redesigned (if necessary) and the new design shall be implemented and monitored, as in subsection (G)(3)(d) of this section.~~

~~j. Correction procedures shall be approved by a qualified consultant and the City.~~ (Ord. 581 § 1 (Exh. 1), 2010; Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 5(E), 2000).

Subchapter 5.

Flood Hazard Areas

20.80.360 FLOOD HAZARD - Description and purpose.

A. A flood hazard area consists of the special flood hazard areas and protected areas as defined in Chapter 13.12 SMC, which comprise the regulatory floodplain.

B. It is the purpose of these regulations to ensure that the City of Shoreline meets the requirements of the National Flood Insurance Program and maintains the City as an eligible community for Federal flood insurance benefits. (Ord. 641 § 5 (Exh. A), 2012; Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(A), 2000).

20.80.370 FLOOD HAZARD - Classification.

Flood hazard areas shall be determined pursuant to the requirements of the floodplain management regulations, Chapter 13.12 SMC, which include, at a minimum, all lands identified on the 100-year floodplain designations of the current Federal Emergency Management Agency (FEMA) flood insurance rate map for King County as identified in SMC 13.12.300. (Ord. 641 § 5 (Exh. A), 2012; Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(B), 2000).

20.80.380 FLOOD HAZARD - Development limitations.

All development within designated flood hazard areas shall comply with Chapter 13.12 SMC, Floodplain Management, as now or hereafter amended, and is not subject to the regulations of this chapter. (Ord. 641 § 5 (Exh. A), 2012; Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(C), 2000).

20.80.390 Zero-rise floodway – Development standards and permitted alterations.

Repealed by Ord. 641. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(D), 2000).

20.80.400 FEMA floodway – Development standards and permitted alterations.

Repealed by Ord. 641. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(E), 2000).

20.80.410 Flood hazard areas – Certification by engineer or surveyor.

Repealed by Ord. 641. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(F), 2000).

Subchapter 6.

Aquifer Recharge Areas

20.80.420 AQUIFER RECHARGE - Description and purpose.

A. Aquifer recharge areas provide a source of potable water and contribute to stream discharge during periods of low flow. Urban-type pollutants may enter watercourse supplies through potential infiltration of pollutants through the soil to ground water aquifers.

B. The primary purpose of aquifer recharge area regulations is to protect aquifer recharge areas by providing for regulation of land use activities that pose a risk of potential aquifer contamination and to minimize impacts through the application of strict performance standards. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 7(A), 2000).

C. At the time of adoption of the updated critical areas regulations, Chapter 20.80 SMC, Critical Areas, in November 2015, there were no identified critical aquifer recharge areas identified within the City of Shoreline.

20.80.430 AQUIFER RECHARGE - Classification.

Aquifer recharge areas shall be classified based on the soil and ground water conditions and risks to surface water during periods of low hydrology. Classification depends on the combined effects of hydrogeological susceptibility to contamination and contaminant loading potential, and includes upland areas underlain by soils consisting largely of silt, clay or glacial till, upland areas underlain by soils consisting largely of sand and gravel, and wellhead protection areas and areas underlain by soils consisting largely of sand and gravel in which there is a predominantly downward or lateral component to ground water flow. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 7(B), 2000).

20.80.440 AQUIFER RECHARGE - Alteration.

The following land uses and activities shall require implementation of Best Management Practices (BMPs) as established by the Department of Ecology:

A. Land uses and activities that involve the use, storage, transport or disposal of significant quantities of chemicals, substances or materials that are toxic, dangerous or hazardous, as those terms are defined by State and Federal regulations.

B. On-site community sewage disposal systems.

C. Underground storage of chemicals.

D. Petroleum pipelines.

E. Solid waste landfills.

F. Stormwater management, including infiltration, and groundwater recharge. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 7(C), 2000).

20.80.450 AQUIFER RECHARGE - Performance standards and requirements.

Any uses or activities located in an aquifer recharge area, as defined within this subchapter, that involve the use, storage, transport or disposal of significant quantities of chemicals, substances, or materials that are toxic, dangerous or hazardous, as those terms are defined by State and Federal regulations, shall comply with the following additional standards:

A. Underground storage of chemicals, substances or materials that are toxic, hazardous or dangerous is discouraged.

B. Any chemicals, substances or materials that are toxic, hazardous or dangerous shall be segregated and stored in receptacles or containers that meet State and Federal standards.

C. Storage containers shall be located in a designated, secured area that is paved and able to contain leaks and spills, and shall be surrounded by a containment dike.

D. Secondary containment devices shall be constructed around storage areas to retard the spread of any spills and a monitoring system should be implemented.

E. A written operations plan shall be developed, including procedures for loading/unloading liquids and for training of employees in proper materials handling.

F. An emergency response/spill clean-up plan shall be prepared and employees properly trained to react to accidental spills.

G. Any aboveground storage tanks shall be located within a diked containment area on an impervious surface. The tanks shall include overfill protection systems and positive controls on outlets to prevent uncontrolled discharges.

H. Development should be clustered and impervious surfaces limited where possible.

I. No waste liquids or chemicals of any kind shall be discharged to storm sewers.

J. All development shall implement Best Management Practices (BMPs) for water quality, as approved by the City, including the standards contained within the ~~City of Shoreline~~ adopted s~~S~~tormwater ~~Design~~ m~~M~~anual, such as biofiltration swales and use of oil-water separators, and BMPs appropriate to the particular use proposed. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 7(D), 2000).

Subchapter 7.

Stream Areas

20.80.460 Designation and purpose.

A. Streams are those areas where surface waters produce a defined channel or bed, not including irrigation ditches, canals, storm or surface water runoff devices or other entirely artificial watercourses, unless they are used by salmonids or are used to convey streams naturally occurring prior to construction. A channel or bed need not contain water year-round; provided, that there is evidence of at least intermittent flow during years of normal rainfall.

B. Stream areas and their associated buffers provide important fish and wildlife habitat and corridors; help to maintain water quality; store and convey stormwater and floodwater; recharge groundwater; and serve as areas for recreation, education and scientific study and aesthetic appreciation.

C. The primary purpose of the stream area regulations is to avoid impacts to streams and associated riparian corridors and where possible, provide for stream enhancement and rehabilitation. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 8(A), 2000).

20.80.470 Streams.

A. "Type I streams" are those streams identified as "Shorelines of the State" under the City Shoreline Master Program.

B. "Type II streams" are those streams that are not Type I streams and are either perennial or intermittent and have one of the following characteristics:

1. Salmonid fish use; or

2. Demonstrated salmonid habitat value as determined by a qualified professional.

C. "Type III streams" are those streams which are not Type I or Type II streams with perennial (year-round) or intermittent flow with channel width of two feet or more taken at the ordinary high water mark and are not used by salmonid fish.

D. "Type IV streams," which are not Type I, Type II, or Type III, are those streams with perennial or intermittent flow with channel width less than two feet taken at the ordinary high water mark that are not used by salmonid fish.

E. "Piped stream segments" are those segments of streams, regardless of their type, that are fully enclosed in an underground pipe or culvert.

F. For the purposes of this section, "salmonid fish use" and "used by salmonid fish" is presumed for:

1. Streams where naturally recurring use by salmonid populations has been documented by a government agency;

2. Streams that are fish passable or have the potential to be fish passable by salmonid populations, including those from Lake Washington or Puget Sound, as determined by a qualified professional based on review of stream flow, gradient and barriers and criteria for fish passability established by the Washington Department of Fish and Wildlife; and

3. Streams that are:

a. Planned for restoration in a six-year capital improvement plan adopted by a government agency that will result in a fish passable connection to Lake Washington or Puget Sound.

b. Planned removal of the private dams that will result in a fish passable connection to Lake Washington and Puget Sound. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 8(B), 2000).

20.80.480 Required buffer areas.

A. Required buffer widths shall reflect the sensitivity of the stream type, the risks associated with development and, in those circumstances permitted by these regulations, the type and intensity of human activity and site design proposed to be conducted on or near the stream area. Stream buffers shall be measured from the ordinary high water mark (OHWM) or the top of the bank, if the OHWM can not be determined.

B. The following buffers are established for streams:

Table 20.80.480B

Stream Type	**Standard Buffer Width (ft)**	**Minimum Buffer Width (ft)**
Type I	150	115
Type II	115	75
Type III	65	35
Type IV	35	25
Piped Stream Segments	10	10

C. The standard buffer width shall be established; provided, that the buffer may be reduced to the minimum buffer listed above if the applicant can demonstrate that a smaller buffer is adequate to protect the stream functions and implements one or more enhancement measures to result in a net improvement to the stream and buffer. The measures determined most applicable and/or appropriate will be considered in reducing buffer requirements. These include but are not limited to:

1. Removal of fish barriers to restore accessibility to anadromous fish.

2. Enhancement of fish habitat using log structures incorporated as part of a fish habitat enhancement plan.

3. Enhancement of fish and wildlife habitat structures that are likely to be used by wildlife, including wood duck houses, bat boxes, nesting platforms, snags, rootwads/stumps, birdhouses, and heron nesting areas.

4. Additional enhancement measures may include:

a. Planting native vegetation within the buffer area, especially vegetation that would increase value for fish and wildlife, increase stream bank or slope stability, improve water quality, or provide aesthetic/recreational value; or

b. Creation of a surface channel where a stream was previously underground, in a culvert or pipe. Surface channels which are "daylighted" shall be located within a buffer area and shall be designed with energy dissipating functions such as meanders to reduce future erosion;

c. Removal or modification of existing stream culverts (such as at road crossings) to improve fish passage and flow capabilities; or

d. Upgrading of retention/detention facilities or other drainage facilities beyond required levels.

D. No structures or improvements shall be permitted within the stream buffer area, including buildings, decks,

docks, except as otherwise permitted or required under the City's adopted Shoreline Master Program, or under one of the following circumstances:

1. When the improvements are part of an approved rehabilitation or mitigation plan; or

2. For the construction of new roads and utilities, and accessory structures, when no feasible alternative location exists; or

3. The construction of trails over and in the buffer of piped stream segments, and the construction of trails near other stream segments consistent with the following criteria:

   a. Trails should be constructed of permeable materials;

   b. Trails shall be designed in a manner that minimizes impact on the stream system;

   c. Trails shall have a maximum trail corridor width of 10 feet; and

   d. Trails should be located within the outer half of the buffer, i.e., that portion of the buffer that is farther away from the stream; or

4. The construction of footbridges; or

5. The construction and placement of informational signs or educational demonstration facilities limited to no more than one square yard surface area and four feet high, provided there is no permanent infringement on stream flow; or

6. The establishment of stormwater management facilities, such as bio-swales, over and in the buffer of piped stream segments and when located outside of the minimum buffer area for other stream segments as set forth in the Table 20.80.480B.

E. The City may extend the width of the buffer on the basis of site-specific analysis when necessary to comply with an adopted basin plan in accordance with City, County, State or Federal plans to preserve endangered or threatened species.

F. Stream buffer widths may be modified by averaging buffer widths as set forth herein. Buffer width averaging shall be allowed only where the applicant demonstrates to the City:

1. The ecological structure and function of the buffer after averaging is equivalent to or greater than the structure and function before averaging;

2. That the total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging;

3. Buffer averaging shall not result in the buffer width being reduced by more than 25 percent of the required buffer as set forth in the table in subsection (B) of this section and in no case may the buffer be less than the stated minimum width.

4. A habitat survey shall be conducted within the area of concern in order to identify and prioritize highly functional fish and wildlife habitat within the study area.

The City may require buffer averaging to be designed to protect areas of greater sensitivity and function based on the recommendations of a stream report prepared by a qualified professional.

G. Relocation of a Type I, II, or III shall be allowed only when the proposed relocation is part of an approved mitigation or rehabilitation plan, will result in equal or better habitat and water quality, and will not diminish the flow capacity of the stream. Relocation of a Type IV stream shall be allowed only when the proposed relocation will result in equal or better habitat and water quality and will not diminish the flow capacity of the stream.

H. Restoring Piped Watercourses.

1. The City allows the voluntary opening of previously channelized/culverted streams and the rehabilitation and restoration of streams, especially on public property or when a property owner is a proponent in conjunction with new development.

2. When piped watercourse sections are restored, a protective buffer shall be required of the stream section. The buffer distance shall be based on an approved restoration plan, regardless of stream classification, and shall be a minimum of 10 to 25 feet, at the discretion of the Director, to allow for restoration and maintenance. The stream and buffer area shall include habitat improvements and measures to prevent erosion, landslide and water quality impacts. Opened channels shall be designed to support fish access, unless determine to be unfeasible by the City.

3. Removal of pipes conveying streams shall only occur when the City determines that the proposal will result in a new improvement of water quality and ecological functions and will not significantly increase the threat of erosion, flooding, slope stability or other hazards.

4. Where the buffer of the restored stream would extend beyond a required setback on an adjacent property, the applicant shall obtain a written agreement from the affected neighboring property owner. (Ord. 398 § 1, 2006; Ord. 299 § 1, 2002; Ord. 238 Ch. VIII § 8(C), 2000).

20.80.490 Alteration.

A. Bridges shall be used to cross Type I streams. Culverted crossings and other obstructive means of crossing Type I streams shall be prohibited.

B. Culverts are allowable only under the following circumstances:

1. Crossing of Type II, III, and IV streams;

2. When fish passage will not be impaired;

3. When the following design criteria are met:

a. Oversized culverts will be installed;

b. Culverts will include gradient controls and creation of pools within the culvert for Type II streams where appropriate; and

c. Gravel substrate will be placed in the bottom of the culvert to a minimum depth of one foot for Type II streams;

4. The applicant or successors shall, at all times, keep any culvert free of debris and sediment to allow free passage of water and, if applicable, fish.

C. The City may require that a culvert be removed from a stream as a condition of approval, unless it is demonstrated conclusively that the culvert is not detrimental to fish habitat or water quality, or removal would be detrimental to fish or wildlife habitat or water quality. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 8(D), 2000).

20.80.500 Mitigation performance standards and requirements.

A. **Appropriate Stream Mitigation Sequence and Actions.** Where impacts cannot be avoided, and the applicant has exhausted feasible design alternatives, the applicant or property owner shall seek to implement other appropriate mitigation actions in compliance with the intent, standards and criteria of this section. In an individual case, these actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal, and/or implementation of the performance standards listed in this section.

B. Significant adverse impacts to stream area functions and values shall be mitigated. Mitigation actions shall be

implemented in the preferred sequence: Avoidance, minimization, restoration and replacement. Proposals which include less preferred and/or compensatory mitigation shall demonstrate that:

1. All feasible and reasonable measures will be taken to reduce impacts and losses to the stream, or to avoid impacts where avoidance is required by these regulations; and

2. The restored, created or enhanced stream area or buffer will be available and persistent as the stream or buffer area it replaces; and

3. No overall net loss will occur in stream functions and values.

C. **Location and Timing of Stream Mitigation.**

1. Mitigation shall be provided on-site, unless on-site mitigation is not scientifically feasible due to the physical features of the property. The burden of proof shall be on the applicant to demonstrate that mitigation cannot be provided on-site.

2. When mitigation cannot be provided on-site, mitigation shall be provided in the immediate vicinity of the permitted activity on property owned or controlled by the applicant such as an easement, provided such mitigation is beneficial to the critical area and associated resources. It is the responsibility of the applicant to obtain title to off-site mitigation areas.

3. In-kind mitigation shall be provided except when the applicant demonstrates and the City concurs that greater functional and habitat value can be achieved through out-of-kind mitigation.

4. Only when it is determined by the City that subsections (B)(1), (2), and (3) of this section are inappropriate and impractical shall off-site, out-of-kind mitigation be considered.

5. When stream mitigation is permitted by these regulations on-site or off-site, the mitigation project shall occur near an adequate water supply (river, stream, groundwater) with a hydrologic connection to the mitigation area to ensure successful development or restoration.

6. Any agreed upon mitigation proposal shall be completed prior to project construction, unless a phased schedule, that assures completion concurrent with project construction, has been approved by the City.

7. Restored or created streams, where permitted by these regulations, shall be an equivalent or higher stream value or function than the altered stream.

D. The performance standards in this section and the relevant performance standards located within the wetland standards of SMC 20.80.350(E)(1) through (17) shall be incorporated into mitigation plans submitted to the City for impacts to critical areas. In addition, the City may prepare a technical manual which includes guidelines and requirements for report preparation. The performance standards shall apply to any mitigations proposed within Type I, Type II or Type III streams within the City.

E. On completion of construction, any approved mitigation project must be signed off by the applicant's qualified consultant and approved by the City. Signature of the qualified consultant and approval by the City will indicate that the construction has been completed as planned.

F. **Monitoring Program and Contingency Plan.** A monitoring program shall be implemented by the applicant to determine the success of the mitigation project and any necessary corrective actions. This program shall determine if the original goals and objectives are being met. The monitoring program will be established consistent with the guidelines contained in SMC 20.80.350(G). (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 8(E), 2000).